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NATIONAL INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

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MEETING 40

ADVISORY BOARD ON

RADIATION AND WORKER HEALTH

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TRANSCRIPT LEGEND

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-- (sic) denotes an incorrect usage or pronunciation of a word which is transcribed in its original form as reported.

-- (phonetically) indicates a phonetic spelling of the word if no confirmation of the correct spelling is available.

-- "uh-huh" represents an affirmative response, and "uh-uh" represents a negative response.

-- "*" denotes a spelling based on phonetics, without reference available.

-- (inaudible)/ (unintelligible) signifies speaker failure, usually failure to use a microphone.

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P R O C E E D I N G S

(1:15 p.m.)

WELCOME AND OPENING COMMENTS
DR. PAUL ZIEMER, CHAIR

DR. ZIEMER: Good afternoon, everyone. I'd like to call the meeting to order. This is the 40th meeting of the Advisory Board on Radiation and Worker Health. We're pleased to be back in Las Vegas. This Board met here a little over two years ago, actually in this very hotel, although at that time we met in the -- what do I call it -- the theater, which I think was smaller than this room; I know you barely could squeeze in. But we're pleased to be back in Las Vegas.

We have an opportunity in several places during this meeting for input from the public. And if you do wish to make comments to the Board, we'd like to ask that you sign up. There's a sign-up booklet in the foyer, so please do that.

Also, my usual reminder is -- to everyone, Board members, staffers, members of the public -- please register your attendance with us in the registration book which is also in the

foyer.
On the tables over to my right are various documents, including today's or this week's agenda and various documents that the Board will be using as part of its deliberations this week, so please feel free to take copies of those as -- as they may be needed as you follow along with the deliberations of this body in the next two or three days.
Our Designated Federal Official is Dr. Lewis Wade, and he's going to make a couple of opening remarks, and then we will continue with the agenda.
DR. WADE: Thank you, Dr. Ziemer. Welcome, all. And I thank particularly the Board members for their service.
Before I make a couple of opening comments I would like to try and deal with the issue of whether or not we're being heard by our friends and colleagues that are on the telephone. Is -- can you hear me if you are on the telephone?
UNIDENTIFIED: (Unintelligible)
DR. ZIEMER: Maybe we should identify -- is Mike Gibson -- Board member Mike Gibson, Mike, are you on the phone?

MR. GIBSON: Yes, I'm on the phone and --
DR. ZIEMER: Okay, we can barely hear you, Mike, but I think I heard a response.
DR. WADE: Right, I've asked our sound people that if Mike Gibson wishes to speak -- he's a Board member -- he needs to be heard immediately, so if you could do what you need to do to -- to amplify his voice, we would appreciate that. They're trying to find a balance between the settings so that we can be heard and we can hear them.
The Board, as currently constituted, is made up of people you see here plus Mike Gibson. I welcome Wanda Munn. Wanda is a long-time Board member. As you know, I announced that Wanda was not a member of the Board during our last call. Since then Wanda is back with the Board and we certainly welcome her back. As Dr. Ziemer mentioned this morning, I know of no one who can tell me whether she was actually off the Board. I only know now that she is on the Board, and that's more than enough for us to continue with our business.
I bring you warm regards from the Secretary of HHS and from the Director of CDC, and certainly

from the Director of NIOSH, Dr. John Howard. And I welcome you again and I look forward to a most productive Board meeting.

DR. ZIEMER: Thank you very much, Dr. Wade. Also I do want to note and recognize Michele Jacquez-Ortiz, who's from Congressman Tom Udall's staff -- Congressman Tom Udall of New Mexico. Welcome, we're glad to have you here. We may have -- I know that Kathleen Rozner from Senator Reid's staff was here earlier. Maybe we'll recognize her when she returns, but we're -- we're pleased to have the representatives from various Congressional groups with us.

DR. WADE: Are there any Congressional representatives or staff members on the line who want to be identified?

(No responses)

Okay.

CHARTER FOR SUBCOMMITTEE

DR. ZIEMER: Thank you. Our first item for business this afternoon deals with our subcommittee. We have -- the Board has -- currently has one subcommittee that is chartered. It's called the Subcommittee on Dose Reconstruction and Site Profile Reviews.

That subcommittee, if action taken at our last phone meeting is finalized, will morph, as it were, into a Subcommittee on Dose Reconstruction Reviews and the responsibility for site profile reviews will no longer be part of that subcommittee's charter.

This morning when the subcommittee met it approved for recommendation to the full Board a revision in the charter that would accomplish the change, mainly the change in reducing the responsibilities to focus completely on dose reconstructions. And the related change would be to specify a smaller subgroup of this full Board as the membership of the subcommittee.

The document is -- Board members, is the first tab in your agenda book. There are copies of this document on the table for members of the public. It's called Draft Rev 1 and it has today's date on it, and it says -- it's Advisory Board on Radiation and Worker Health, Establishment of Subcommittee.

The establishment of the subcommittee actually is an action that would have to be taken by the Secretary of Health and Human Services, so if the Board does approve this proposed charter

today, it goes as a recommendation to the Secretary for his final action.

Board members, we have then a recommendation, which constitutes a motion to approve the document. There are a couple of changes in the document that resulted from our meeting this morning. One is a typographical in the first paragraph -- first paragraph, line three in quotes where it currently says "very a reasonable sample" should say "verify a reasonable sample," so make that a pen and ink correction on that typo.

And then on the attachment, page three, called Membership Roster, the list of proposed members now should read, as it comes from the subcommittee, Mark Griffon Chairman, Michael Gibson, John Poston, Wanda Munn as members, Robert Presley Alternate 1 and Brad Clawson as Alternate 2 members, Lewis Wade as the Designated Federal Official.

So this recommendation from the subcommittee represents a motion before the Board. It is open for discussion.

I might add one other thing, that if we approve this I believe -- and Dr. Wade, you can help me

in case I have this wrong, but it seems to me that we have to take action to terminate the other charter and therefore request that it be ended and that this replace it. Would that be your understanding?

DR. WADE: Yes, that could be part of your motion, although if you did not make that motion, I would take that sense and make that recommendation, but it would be better part of your motion.

DR. ZIEMER: Okay. Dr. Poston?

DR. POSTON: Mr. Chairman, before we vote on this I'd like to tidy it up a little bit. Under --

DR. ZIEMER: Motion to tighten things up.

DR. POSTON: Under Function, number 1, it says "review and recommended," I think that should be "review and recommend".

DR. ZIEMER: Thank you, that's correct -- a friendly amendment.

DR. POSTON: And under number 4, I think we probably don't need the -- after "members'", which is possessive, it should be "conflicts of interest" and I propose we delete the next word, "standing". That seems to be

unnecessary.

DR. ZIEMER: I certainly agree with what you're saying. I'm not sure why it's there. It somehow got carried over, and perhaps incorrectly, from the original.

Board members', it's a plural possessive, should be conflicts of interest, and then eliminate the word "standing". I'll take it without objection that we accept these as friendly clean-up amendments.

DR. POSTON: Thank you.

DR. ZIEMER: Thank you. Further comments or questions?

MR. GIBSON: Dr. Ziemer, this is Mike. Could you -- could I hear that repeated again? It's still kind of vague here and --

DR. ZIEMER: What I'll do is have us act on this document and then I'll ask for a separate motion on the issue of terminating the other charter.

Are you ready to vote on this document?

MR. GIBSON: Dr. Ziemer?

DR. ZIEMER: It appears that we're ready to vote. All in favor say aye.

(Affirmative responses)

UNIDENTIFIED: Hold on, you've got a --
DR. ZIEMER: Oh, hold on.
UNIDENTIFIED: (Unintelligible)
DR. ZIEMER: I'm sorry. Mike, did you have a comment?
MR. GIBSON: Yes, could I hear --
DR. ZIEMER: Speak real loud.
MR. GIBSON: -- the last clean-up motion by Mr. -- Dr. Poston again about the standing issue?
DR. ZIEMER: I think --
MR. GIBSON: (Unintelligible)
DR. ZIEMER: -- Mike, what you're saying -- Dr. Poston asked -- suggested that the word "standing," after the word "interest," be deleted. It didn't seem to make sense there so -- so "conflicts of interest and ensuring a balance" and so on. Was -- does that clarify what you were asking?
MR. GIBSON: Dr. Ziemer, this -- this connection for some reason this time is just really not working. I hear you a little --
DR. ZIEMER: We're hearing you very well right now, Michael.
MR. GIBSON: I'm still missing parts of what people --

DR. ZIEMER: Could you repeat your comment?

(No response)

Michael, could you repeat your comment, please?

MR. GIBSON: I'm hearing everyone a little more -- with a little more volume this afternoon, but I still am missing words and bits and pieces, and I didn't hear exactly what Dr. Poston was proposing.

DR. ZIEMER: Oh, okay, let me repeat, Michael. Can you hear me?

MR. GIBSON: I can hear you, yeah. I heard that.

DR. ZIEMER: Michael, I'm going to repeat if you can hear me. Can you hear me?

MR. GIBSON: Yes, I can.

DR. ZIEMER: Okay. Under item 1 of Functions, the word "recommended" should simply be "recommend" -- "review and recommend". The next is under item 4. On the second line instead of the word "conflict," it should say "conflicts" -- "Board members' conflicts of interest," and then delete the word "standing". Those were the changes. Michael, could -- could you hear those?

MR. GIBSON: Yeah, I heard that. Could some --

could you -- could Dr. Poston please describe what he means by "standing"? Is that -- I mean standing conflict of interest or --

DR. ZIEMER: No, he didn't know what the word "standing" meant, either, and neither did the rest of us. We -- that's why we were asking that it be deleted.

MR. GIBSON: I just -- my concern is does that bring it into the future or -- is it a standing conflict of interest or something in the past I guess is what I'm asking.

DR. ZIEMER: Yeah, I -- I don't think we -- I don't think we know why the word "standing" was in there in the first place, so we're not understanding ourselves why it was there, unless there should have been a comma there. Perhaps it has to do with the standing of the members in some sense with respect to a site. I don't know. I think the word was in the original document, but I don't know why.

DR. WADE: And I think currently, Michael, will just refer to a member's conflict of interest as they exist at that point in time.

MR. GIBSON: As they exist at that point or this point in time?

DR. WADE: Correct.
DR. ZIEMER: Are we okay on that?
MR. GIBSON: Are -- is it as they exist at this point in time or at that point in time previously?
DR. WADE: At this point in time.
MR. GRIFFON: At the time that -- Mike, it's at the time the panels will be selected, so you know. Did you hear that?
MR. GIBSON: I heard at the time the panel will be selected. That's all I heard.
DR. ZIEMER: Yeah, it's --
MR. GRIFFON: That's all I said.
DR. ZIEMER: Well, the -- the sense of the -- of the item, assign the cases, would simply take into account conflicts of interest. That's the thrust of it. And conflicts of interest as they currently are defined, that's -- some of that is present and some of that is past, so it's as conflicts of interest are -- are defined and the word "standing" is not really needed to -- for -- as a clarifier, therefore we're simply deleting it. Hopefully that clarifies that.
Any other questions or comments?

(No responses)

If not, I'm going to call for a vote. All those in favor, aye?

(Affirmative responses)

And Michael, are you voting aye?

MR. GIBSON: With respect, Dr. Ziemer, and it's my apology I'm not there, I'll abstain from this vote.

DR. ZIEMER: Okay, thank you. Any nays?

(No responses)

And Michael is abstaining, we'll show that in the record as well. Thank you very much. The motion carries.

While we're on the topic of then the -- this charter, I would entertain a motion that we recommend that the previous charter for the Subcommittee on Dose Reconstruction and Site Profile Reviews be terminated.

I guess nobody wants to make such a motion 'cause you have such an attachment to the old --

MR. PRESLEY: So moved.

DR. ZIEMER: So moved, okay, then --

MS. MUNN: Second.

DR. ZIEMER: -- and seconded. Now for -- any

discussion?

(No responses)

Call for the vote. All in favor, aye.

(Affirmative responses)

Any opposed, no.

(No responses)

Abstentions? And Michael, I didn't hear, but we didn't take a nose count, did you vote --

MR. GIBSON: I'll vote aye.

DR. ZIEMER: Voting aye.

DR. WADE: Thank you.

DR. ZIEMER: Thank you, the ayes have it. While we're on the topic then of the subcommittees, this also brings up the issue of working groups since the old charter included working group activities and we now are doing most of the workgroups -- or most of the site profile work by workgroups. I'd like to take a moment and review the workgroup assignments, keeping in mind that at our last meeting when we thought Wan-- our last meeting, which was the phone meeting August 8th, we thought that Wanda had finished her term on the Board and so we excluded her from the appointments. In fact, I think we actually replaced her on a

couple of cases or --

DR. WADE: No, we did not replace her.

DR. ZIEMER: We didn't replace her, but we removed her -- she is irreplaceable, now I remember.

MS. MUNN: Uh-huh, pushed me off the edge.

DR. ZIEMER: Pushed you off the edge, Wanda. But let us review those working group memberships and, if the Board so pleases, we can restore those formally if the Board is inclined to do so and -- yeah, right, so let's -- Lew has -- has a list of the workgroups and let's review those, if you would, Lew.

DR. WADE: Okay. Now I'm going to focus on current working groups of the Board. There is a working group on the Nevada Test Site site profile. It's chaired by Presley and membered by Roessler and Clawson.

There is a workgroup on the Savannah River Site site profile chaired by Gibson and members Clawson, Griffon and Lockey.

There is a workgroup on the Board topic of SEC petitions and petition reviews chaired by Dr. Melius, with members Griffon, Roessler and Lockey.

There is a workgroup on the Rocky Flats SEC and site profile review chaired by Griffon with members Gibson and Presley.
There is a workgroup on the Hanford site site profile review chaired by Melius with members Clawson, Ziemer and Poston.
The only changes in that roster that was made on the August 8th call was to remove Wanda Munn from the workgroup on the Nevada Test Site site profile and from the workgroup on the Rocky Flats SEC and site profile review. She was not replaced on either.
DR. ZIEMER: So it would be in order to have a motion to restore Wanda Munn's position on those two workgroups.
MR. PRESLEY: So moved.
MR. CLAWSON: Second.
DR. ZIEMER: Discussion?
(No responses)
All in favor, aye?
(Affirmative responses)
Opposed, no?
(No responses)
Abstentions?
(No responses)

DR. WADE: Ask for Michael.

DR. ZIEMER: Michael?

MR. GIBSON: I vote aye.

DR. ZIEMER: And it is so ordered, the ayes have it.

DR. WADE: Just for the record, with the indulgence of the chairs of those working groups, Wanda was on the call for those -- all of the working group calls between August 8th and this point and is fully up to date on their deliberations.

MS. MUNN: That's correct.

NIOSH PROGRAM UPDATE

DR. ZIEMER: Thank you very much. We now will hear from Larry Elliott, Director of the OCAS program, who's going to give us an update on the NIOSH program. And Larry, if you can also report on the status of Dr. Neton, that would be appreciated.

DR. WADE: And I invite Board members as appropriate to move their chairs or -- so they can have access to the screen.

MR. ELLIOTT: Thank you, Dr. Ziemer, members of the Board and general public and colleagues. I appreciate the opportunity to be here with you

again today and give you a brief update on the dose reconstruction program, our accomplishments and status report on issues. Jim Neton sends his warm regards and his regrets that he can't join you here in Las Vegas at this meeting. He's recovering from surgery and we look forward to him rejoining the OCAS team very soon, probably about four to six weeks. And so I know that he's in many of your thoughts and he appreciates the kind cards and comments and gifts that have been sent to him.

With regard to the claim status information for all of the cases that have been referred to NIOSH for dose reconstruction from the Department of Labor, we have received, as of August 31st of this year, 22,316 claims. Of those about 75 percent have been completed under a dose reconstruction and returned to the Department of Labor.

As you can see from this slide, 14,731 of those claims have been submitted with a dose reconstruction report to DOL; 661 claims were pulled by the Department of Labor -- and when we say pulled, that means that Department of

Labor retrieved that claim from us and stopped any dose reconstruction activity on the claim. And this can be for various reasons. They sent us the claim inadvertently, it was not a cancer claim or it was a -- a claim that was in the SEC for one of the Congressionally-statuted classes, or a variety of other reasons, but at any rate, 661 claims have been pulled back by DOL. We currently have seen 1,255 claims pulled from the dose reconstruction process to be handled by the Department of Labor under a specific Special Exposure class eligibility situation. And 175 claims have been administratively closed at dose reconstruction for lack of a response to our request to the claimant as to whether or not they have any additional information to provide.

We have about 5,500 claims still at NIOSH. You're going to see different numbers from my presentation from -- to that of Jeff Kotsch's, who'll talk later from DOL, and we can explain the difference in those numbers, I hope, but there's a reason for those differences -- different points of snapshot in time. The way we build the number and explain the number can

cause a difference in the reporting. But at any rate, we still have about 25 percent of the claims that have been sent to us in our hands for dose reconstruction to work on.

Of those 14,731 claims that we have returned to the Department of Labor for a decision, we understand that about 27 percent, or 3,982, have had a POC or probability of causation greater than 50 percent, thus they were found to be compensable. Conversely about 73 percent of the cases had a POC or probability of causation less than 50 percent and were denied compensation.

I think from the DC meeting it was of interest to learn about the different types of dose reconstruction that we do, essentially three main categories, if you will -- best estimate, overestimate, underestimate. And I've broken those out in this chart for the Board -- for the Board's consideration in going about doing your review work.

As you can see here that the best estimates are the -- are the top -- top three here, full internal, full -- and external, full primary external and full primary internal. This -- as

you know, internal/external goes to the source of the dose, whether it's inside your body or outside your body. But these represent -- these three here represent those best estimate cases.

Overestimates are where we complete a dose reconstruction to show that the most -- high -- highest plausible dose that could have been acquired by the Energy employee was not going to relate to causation of their cancer, and so we may not have to do a full-blown best estimate. We can show by overestimate that the case is non-compensable. And as you can see, about 67 percent of the cases fall into this category right here where overestimate on internal and external dose was done.

And you can see the underestimate in these three numbers here, and this is where we use either the dose of record, the original badge results or the urine bioassay results, to show that the claim is compensable and we don't have to complete a dose reconstruction to the fullest extent.

Of the 5,500 some-odd cases remaining at NIOSH for dose reconstruction we have about 1,230

that are currently assigned to a dose reconstructor, so they are working their way through that process; 622 initial draft dose reconstructions are sitting with claimants as of August 31st. That means that we have finished our work and the claimant has signed an OCAS-1 form stating that they have no additional information to provide us -- or that's what we're waiting for, we're waiting for that OCAS-1 to come back saying that they have no additional information to provide us. I might add here that this next six-month period is going to be a very interesting and critical period of time in our projection of how our work flows. Why do I say that? In the next six months we should see a full reduction of the backlog of claims. We should arrive at a steady state, and we define steady state as no claims in our hands for dose reconstruction that are over a year old.

The ORAU team -- and why do I say this? The ORAU team has achieved a capacity of dose reconstruction production of about 160 cases or claims reconstructed in a -- in a -- per week, and we have seen them complete 3,736 claims in

the last six months. So they have this capacity, and if you can do the math, I think you can see in the -- in the algebra there that we're going to approach steady state very soon next year.

We're very much concerned and interested of course with our oldest claims. We're striving to finish those dose reconstructions up for those claimants who submitted their claims back in 2001 and we're still working on those. We track claims by giving -- assigning a tracking number, as you know, and so we look at the first 5,000 claims to see where -- how much we have achieved and -- and what is left to be done there. 4,837 of those first 5,000 claims have been completed with a dose reconstruction report to the claimant, that leaving 163 active cases among the first 5,000 claims; 24 of those have draft dose reconstructions with the claimants and so we're awaiting the OCAS-1; and 139 claims below 5,000 in our tracking system are active with no DR yet -- dose reconstruction report -- and these are perhaps the most difficult claims that we face. They represent small -- represent small AWE sites

with only one or two claims. I'll talk about those in a moment while we're doing -- with regard to those claims in those situations. This graphic is a standard graphic, but it'll probably be the last time you see it. I'm going to change it, and I know that hurts some people maybe -- Wanda's saying don't do that, don't do that -- but you'll see it again but it'll be reconstituted and it'll be, I hope, providing some additional information. So what you see here are the cases that we have completed by 1,000 number tracking number. And the blue line indicates -- the blue part of the bar indicates those cases that have been completed, dose reconstructions have been returned to Department of Labor for decision. The red bar -- the part of the bar represents cases that have been pulled by the Department of Labor or administratively closed. And the green shows you the cases that are pended for a variety of reasons. We pend cases to make sure that we don't expend any unnecessary effort on those cases and we're working on some particular issue or obstacle that needs to be resolved before we advance the dose

reconstruction and unpend the cases.
What's missing here and I will show in the next -- the next Board meeting are the number of SEC claims that have moved into a class. I think that's important. And that will leave only one other number to show in this bar besides the SEC claims, and those will be the reworks, the number of reworks in that particular section that are still open. So I'm just going to try to be more informative with this graph. You'll see it again, but in a reconstituted form.
You've also seen this graph a number of meetings. This -- this graph shows the cases that we have received from the Department of Labor in the blue line -- over the course of time, by month or quarter, October through December '01. The green line reports the draft dose reconstruction reports to the claimants that we have submitted. And then, after we've gotten the OCAS-1 back from the claimant, the red line represents the final dose reconstruction reports that have been provided to the Department of Labor.
There are some interesting artifacts in this graph. I spoke about them at the Washington,

DC meeting and I'll talk briefly about them here again. Of course we received claims starting in about the third week of October of '01. And as you can see, that's our -- that was what caused our backlog. And by the time we got up and running with the infrastructure and our rules in place, it wasn't until I believe -- let me make sure I get this right -- the first draft dose reconstruction report was produced somewhere around March of '03, and then you can see and follow how we've done since that point in time. So we are now working off this backlog and, as I said, hope to be done with that early next year.

I spoke briefly about the administratively closed records. The dose reconstruction rule allows us to administratively close a dose reconstruction if we don't hear from the claimant as to whether or not they have additional information to provide on their dose reconstruction. If we don't get that OCAS-1 form, we're required by the regulation to administratively close the claim. We can reopen at any point in time that the claimant so desires. They can either send us a

completed OCAS-1 form, or they can provide additional information that may inform the dose reconstruction. So this shows you the trends of those administratively-closed claims.

I spoke a minute ago about reworks. Reworks come back to us from the Department of Labor. This slide shows you the trends in that regard. It shows you the numbers that we have received in the green side of the bars and the blue side shows you what we have returned to the Department of Labor. Overall this represents about 12 percent of our dose reconstructions that we have completed. I will say to you that the majority of the rework that we do on dose reconstructions is because the demographics of a claim have changed.

What does that mean? Well, there -- the claimant has another cancer, the claimant found additional employment history or something -- or the -- a new survivor has appeared on the claim, which requires us to seek an interview from that survivor if they so choose and we have to reopen the dose reconstruction. So the minority of these reworks are on technical issues, and we've found that when we look at

those -- and we monitor those as close as we can -- we've found that some of those technical issues were like ingestion for Savannah River in the early cases that we reconstructed there, so very few of these reworks are -- are returned to us for technical issues.

We approach the Department of Energy and we have points of contact at each Department of Energy facility that supplies us with information on the dose that has been recorded for Energy employees. Again, we do not accept cumulative dose reports. We only work with original data. We work with the original badge data, bioassay or urinalysis data. And you can see from this slide the number of outstanding requests that we have with DOE right now are 242 individual claims, of which 83 have exceeded a 60-day time frame in trying to respond to us. We track these on a monthly basis and report back to Department of Energy on any of these delays, and we monitor those delays for certain trends -- whether or not they reflect a certain site not being responsive or if there's individual circumstances that appear in the delay of

response to our requests for information. We follow up on that with the Department of Energy.

Going to the number of SEC classes that have been added to date, as of September 11 ten classes of workers have been added to the Special Exposure Cohort. You can see them listed in this slide and the next one -- Mallinckrodt Chemical, two classes; Iowa Army Ammunition Plant, two classes; Y-12 Plant, two classes; Linde Ceramics Plant, one class; Ames Laboratory, one class; Pacific Proving Ground, a class; Nevada Test Site, a class.

One petition was approved but not added to the SEC and that was the National Bureau of Standards. As you recall, the Department of Labor and Department of Energy determined at the 11th hour that that facility was not a covered facility, after we had done our work recommending to add it as a class.

Six petitions have been evaluated and provided to the Advisory Board for review and are currently under Board deliberation, and you see those listed here and they are on your agenda, I believe, for this meeting.

DR. WADE: Well, four of them.

MR. ELLIOTT: Well, four of them are, yes. Six petition evaluation reports are in development as we speak here in Las Vegas. Folks are back in Cincinnati and around the country working on evaluation reports for the Fernald plant; Monsanto Chemical, which is a precursor to Mound; General Atomics, Los Alamos National Lab, Bethlehem Steel and Harshaw Chemical. There have been 13 requests to add a class to the SEC that are currently in the qualification process. This means that we're working with the petitioners to establish the basis for the petition, and you see those listed there. Twenty-four requests have been added -- to be added to the SEC have been administratively closed, and these submissions were closed for one of these following three reasons. The submissions did not meet the petition requirements as outlined in our rule 42 CFR 83 under Section 83.9. If you look at that Section there's a nice little table in there. I would like to say, all the petitioner has to do is report in their petition those words that are found in that table and they will meet the

basis for the petition, and we will provide an evaluation that will provide an explanation as to whether or not we believe that we can do dose reconstructions. So just a word to the wise, use that table at Section 83.9 out of the rule.

Another reason for a petition having been not qualified for evaluation would be that the submission is already a member of the SEC. Some classes were pre-established, as you know, through Congressional intent, and we have received a couple of those petitions. And once we explain to the petitioner, they've withdrawn.

And likewise, some other petitioners withdrew their -- their interest in providing a petition.

There've been 1,255 claims that are currently at the Department of Labor for class member status eligibility determination, and you see those listed here. I won't read through them, you have them in the presentation in your briefing manual.

880 -- or 180 claims have been sent to the Department of Labor for the two classes that

were added just a couple of weeks ago on September 9th. The Ames Laboratory, we saw 21 claims in our hands and we moved those back over to DOL to determine eligibility. And for the Y-12 1948 to 1957 class we had 159 claims in our hands that needed to be addressed by the Department of Labor in their process.

Just to update you on the number of Technical Basis Documents and Technical Information Bulletins that are used currently within the dose reconstruction program to treat claims, to assist in doing dose reconstructions, we have 140 of those Technical Basis Documents in use right now and 59 Technical Information Bulletins.

There are a number of Technical Basis Documents that are currently under revision. These are living documents, as we have said in the past, and as we find new information, as we hear worker input, as we go around the country and we hold meetings, we gain input and information about our Technical Basis Documents, and so we're working through revising those. And you see those listed here.

I'd also add that ORAU is working through a

review of all of their current Technical Basis Documents, looking specifically at the current draft conflict of interest policy and starting looking through those documents to make sure that they have document owners and site experts, technical experts all properly attributed and identified. So that is also going on in the Technical Basis Document and TIB review.

There are currently -- I mentioned earlier that we have a large number of facilities where we have a small number of claims -- one, two, three, four, five claims for a large number of facilities. As you can see from this slide, we chose to task Battelle under an existing task order contract that NIOSH had. We gave them a specific task under an existing task order contract to address these particular Atomic Weapons Employer sites where we had a large number of sites involved for essentially 1,400 claims. About 15 percent of the claims at the time we did this were represented by the -- this group, and they covered 85 percent of the sites. These 85 percent of the sites did not have a Technical Basis Document, so the first

order of business was for the Battelle folks to be assigned to develop a Technical Basis Document that addressed a group of facilities that had a common, shared experience, like uranium metal processing, uranium refining processing. And so they're working now on developing those Technical Basis Documents. We have them in our hands. They're going through our review and comment resolution process. Of the 1,400 claims that we have assigned to them, we've seen 80 dose reconstructions come forward for our technical review. And of those, we've passed on 37 of those to the claimants, and we expect to see these numbers increase considerably in the next few months. Battelle is also charged with identifying as they -- as they work through these set of claims in these facilities, is there a facility or a claim for which they cannot envision how dose reconstruction can be accomplished. And once we hear that from them, we take that site back from them and we start processing that particular site under what we call an 82.12, which is our dose reconstruction rule which determines that we cannot do dose

reconstruction, and we move into an 83.14 process in our SEC rule whereby we work with that particular claimant and establish a class to be added for that site. So you see here with Dow Chemical out of Illinois is the first one that we have taken up from Battelle to add as a class.

We go into a report on our construction workers. At your Denver meeting there was some misinformation given and I'm still working to give you a clarity and understanding about how we're working on these particular claims for this group of workers. I might say there's no disenfranchised group of workers in this program. We are focusing on all of the workers as best we possibly can with all our resources. So we have the number of cases for construction trades job titles listed here, about 4,140. This is a difficult number to get. It's not the number that's in our electronic database that's trackable. And that's unfortunate, but it's an artifact of -- of the variety of job titles that come out of the Department of Energy and the AWE work sites, and how those job titles are also reported to us in

interviews. And we have -- have wrestled with that trying to make -- trying to come up with a common list of job titles. We have developed that with the support and concerted effort from CPWR and others as -- and CPWR also worked with us and ORAU team on the development of a Technical Information Bulletin that could be used to develop dose for unmonitored construction trades workers. These would have been workers that had worked on a given site for a sub or a subcontractor and weren't part of the M&O prime contractor and did not have monitoring data for them. And so the Technical Information Bulletin 52 that we have developed in conjunction with support from CPWR and ORAU prescribes a way about going how -- how that -- how we go about doing dose reconstruction for that group of workers.

To date we have submitted 3,234 cases to the Department of Labor with a dose reconstruction. And you can see the outcome of those cases here in this slide whereas about 24, 25 percent were found to be compensable, and again about 75 percent were not compensable, with about 906 cases for construction trades awaiting dose

reconstruction at this point in time.
I might add here that as this TIB-52 goes into operation and we work through those dose reconstructions for those claimants, we will also be looking back at the completed dose reconstructions to determine, through a Program Evaluation Review -- you've heard this terminology I've used before. This is a process that we use to look back at completed cases that have been found to be non-compensable and we evaluate whether a modification or a change would affect the decision outcome on those claims. So we'll be going through a Program Evaluation Review on those.
However, we purposely have pended cases awaiting this TIB-52, so the 906 that you see are the bulk of the cases that are going to be affected by this TIB-52. The ones that were completed that I show you on this slide -- we doubt if there's many at all that would be affected or should see a change, because those were done with the data at hand and they were typically monitored workers. So -- but at any rate we will do a Program Evaluation Review.

DR. WADE: And Larry, TIB-52 is going to be presented later.

MR. ELLIOTT: Yes, yes, Brant Ulsh will talk in a little bit more detail about TIB-52, and we are very interested in comments and any review -- comments that we can receive about that. The Board has -- in your first 80 dose reconstruction reviews you've actually looked at seven of those 80 which were construction trades workers, so I'll just share that with you.

We'll go to where we stand on Program Evaluation Review right now. Five have been completed. There's a -- one that's been completed for the Hanford bias factor. We've done one for a situation where we -- we misinterpreted dosimetry records at Savannah River and it underestimated some missed dose so we're -- we've finished that evaluation. We've done another Program Evaluation Review on the error in surrogate organ assignment resulting in an underestimate of X-ray dose at Savannah River. We've completed another one on the effect of adding ingestion intakes to Bethlehem Steel cases, and we've also finished one on the

type of X-ray medical monitoring that they did at Pinellas.

We have three at least -- I think there are more being staged, but these three are under way. In fact, I think the prostate target organ one has already been reported to DOL or is about to be reported to DOL, and we're working on lung target organ and lymphoma target organ. These are a result of modifications that have been made within either our dose reconstruction process or the -- the POC rule.

Let me take you into a little different area than we've -- we've talked about -- never talked about this area before. NIOSH has in its mission a responsibility to set a research agenda for occupational health and safety research, and they have called that NORA, National Occupational Research Agenda. If you go on the NIOSH web site, you'll be able to see all about NORA that you would like to see, I think. NIOSH and our partners are forming eight sector research councils. These include -- these partners include people from academia, industry, labor and government. Each council

will draft a sector-based research set of goals and objectives and action plans, and these agendas will provide guidance to the entire occupational safety and health research community.

There are eight sectors, and I don't have them on this slide but they're on the web site.

What I'm -- the purpose of introducing this -- this whole program to you in this particular set of three slides is to let you know that OCAS is also involved in NORA. Dose reconstruction is what's considered in NORA a cross-sector research area. It's not one of the eight sectors, but it's a cross-sector.

And so we also have to have a committee develop objectives, goals and action plans to disseminate information about what we do, the science behind what we do, and to foster and stimulate additional research beyond just what we have done in dose reconstruction.

Those are -- this -- dose reconstruction program at NIOSH is an applied science program. Our research is applied to the benefit, I hope, of claimants. I know that many claimants don't see it that way, but we try to do our best to

give our best service to the claimants. So we also have a role in NORA in serving in a cross-sector program in dose reconstruction.

So we have a -- a science planning committee that has been established. Dr. Howard asked that we establish a committee. It is a -- a -- this is not the complete roster of the committee. It will be growing, I think, but Dr. Neton will serve as the chair of this committee. Doug Daniels is a health physicist from a research part of the program in NIOSH and not part of our dose reconstruction effort in OCAS. And some of you may know Dade Moeller of Dade Moeller and Associates, who has a very strong interest in seeing the science of dose reconstruction advanced. Dr. Richard Toohey -- you perhaps remember him as being a program manager for the dose reconstruction project on the ORAU team, and he has -- he has returned to serve on this committee.

The committee is -- well, all of our work at NIOSH is guided by the core values at NIOSH. And in those core values we are -- we are focused on providing the best science that we can possibly provide. That science is to be

supported by peer review to ensure that a sharing of thoughts of a wide range of highly qualified professionals is -- is garnered. We should also continue our awareness and be alert to identify and implement changes in a program, especially where advances need to be made. We are careful to use data of the highest quality, supported by cross-checks to ensure that those data are valid. And our work must be transparent and supported by peer reviews.

The second value that we ascribe to at NIOSH is to seek opportunities to partner with industry and government agencies to establish contacts and -- at the proper level with the right people.

Thirdly, we have a value that our program should exemplify diversity, especially in ensuring that our employees are representative, that the efforts that are made to solicit the best possible views and the best solutions are being sought and brought to bear on the problems that we face in occupational health and safety research.

And our final value is that the product of our efforts should be made readily accessible to

those who are interested and are in need of the information.

So with that in mind, the first task that the science planning committee has been given is to work with the *Health Physics* journal, who has asked us if we would be interested in putting forward a special edition of the journal that speaks just to dose reconstruction and the science that has been developed behind that. And so this is an opportunity to gain additional peer review 'cause these articles that will be published in this edition will have a technical peer review. It will be as transparent as we can make it with the journal. There will be a -- you know, it represents a diversity of views, we hope, and will make our work accessible through this particular edition of the journal.

I'm going now to the last couple of slides on our communication initiatives. We have revised the notice that we give claimants about receiving their claim from the Department of Labor, and that acknowledgement packet, with a variety of materials, will be going out to the claimants in January. We have -- that whole

packet right now is in final review with -- with our -- the technical review and legal review with OGC.

We've also been working, as you know, on revising the draft dose reconstruction report, the report that goes to claimants that attempts to explain how we did our work and what the outcome of our work is for that claimant. It's going through a second round of internal technical and peer review, and we hope that it'll be sent to members of this Board in October for your review and your comment on this.

This has not been as easy as one might think. Everybody that looked picks up -- right now I've seen -- just lately I've seen three versions. Each version has a whole different set of messages and content, and everybody that you talk to has a whole different perspective on what should be or should not be in one of these reports. So we look forward to the Board's review on that and their assistance in helping us provide clearer communication.

Lastly, I think we talked about this in DC a little bit, the dose reconstruction video

that's been created is in its final review. External peer review has been completed. The final edits are being made I guess and we hope to see that -- distribution of that video go out to the Resource Centers, go out to -- go on our web site, go into the District Offices of DOL. We'll use it -- upon request, we'll provide it to anybody who wants to see it and we hope it will inform and educate people about what we do with dose reconstruction in this program.

I think that's the last slide I have to...

DR. ZIEMER: All right, thank you very much, Larry. Let's open the floor for questions from the Board members, or comments on your presentation. Dr. Melius?

DR. MELIUS: My first question, Larry, could you explain a little bit more about these Program Evaluation reports? I'm a little confused by the list, and also the -- who they report to. Were they reports to DOL? You -- I believe you stated that the prostate tar-- target organ report was a report being given to DOL.

MR. ELLIOTT: We give these -- yes, Program

Evaluation Reviews result in a report, a report that speaks to all claims that have been reviewed because a modification has been made in an approach or a way we have completed the dose reconstruction for a given claim. We provide that report to the Department of Labor so that they can in turn refer cases back to us for rework that need to be reworked in case a modification results in a change in a decision. They will return those cases to us so that we can rework them.

We don't have this on our web site at this point in time. We are working to put a notice on the web site that will list all of the Program Evaluation reports. We have a procedure that will also be shown on the web site.

I don't know, does that answer your question?

DR. MELIUS: Could you share those reports with the Board?

MR. ELLIOTT: Surely, we can share the reports with the Board if you'd like to see the copy of the reports.

DR. MELIUS: Yeah, I'm just trying to understand them. I just don't --

MR. ELLIOTT: Sure, I can get you --
DR. MELIUS: -- understand.
MR. ELLIOTT: -- a copy of the reports.
DR. MELIUS: Yeah. Can I just ask one quick follow-up? How do those relate to the -- I always refer to them as remands, but the -- how do they relate to the claims sent back to you by the Department of Labor? Or is that a separate --
MR. ELLIOTT: No, that's not -- you may -- we may see in those reworks that I reported on that -- some of those earlier ones may -- may also be reflected in the number of reworks.
DR. MELIUS: So -- so an evaluation would be something that you would generate rather than -- that -- you, being NIOSH, rather than the Department of Labor.
MR. ELLIOTT: Right.
DR. MELIUS: Okay. That helps.
MR. ELLIOTT: We have to work with them, though, to handle the claims. In other words, they have the claim -- and we're really focusing here on the claims that have been completed and found to be non-compensable. We're not touching the compensable ones. We're

saying those are done and they're okay.

DR. MELIUS: Yeah. So like a rework would be -- a technical rework --

MR. ELLIOTT: Yes, these --

DR. MELIUS: -- to you whereas these evaluation reports are from you up to --

MR. ELLIOTT: Right.

DR. MELIUS: -- sort of DOL -- you have self-generated.

MR. ELLIOTT: Yes. I doubt seriously whether there's any -- I'd have to look, we'd have to look, but I don't believe those first five really show any reworks to us. I don't think there were any changes made in compensability based on those first five.

DR. MELIUS: Okay.

MR. ELLIOTT: We'd have to look at that, though.

DR. WADE: Larry, I assume that as the Board goes through and reviews Technical Basis Documents or site profiles, if a change was to be in order based upon those reviews, that would trigger one of these reports.

MR. ELLIOTT: Yes. Yes, it does.

DR. ZIEMER: Thank you. Other comments,

questions for Larry? Yes, Mark.

MR. GRIFFON: Larry, I -- I just -- this is actually something in response to the last face-to-face meeting we had when ORAU mentioned that they were going to go through all the site profiles regarding new conflict of interest concerns and -- and add I guess references or indications of if it was site experts that contributed, et cetera. Do you have a status on that or where -- where all that stands with that, is it...

MR. ELLIOTT: I don't have a status, and the reason why I don't want to report status is the conflict of interest policy is not final. And we really -- ORAU is doing this on their own at this point in time. They know as soon as that policy becomes final they're going to have to live with it so they've -- they've jumped in advanced trying to work through these, but I don't know how far through those reports they are -- through those TBDs they are.

DR. WADE: Right. I mean I think this is a terribly important issue. I will be sure that on our call on October 18th we schedule such a report and an update.

MR. GRIFFON: Okay. I guess that --
DR. ZIEMER: A report from ORAU then?
DR. WADE: A report that would be initiated by ORAU. I don't know if it might be presented by NIOSH or ORAU. I will have to work through those details.
MR. ELLIOTT: Yeah, we'll have to see what's -- what's best there.
MR. GIBSON: Larry, this is Mike.
DR. ZIEMER: Mike, go ahead.
MR. GIBSON: Can I ask a question?
MR. ELLIOTT: Sure, Mike.
MR. GIBSON: You know, I -- I know that you and the Department of Labor are doing, you know, the best you can with the data you have available. But you know, I think the reason for this legislation was that, you know, admittedly by the Department of Energy, they didn't adequately monitor their employees. So even if you go back to the raw data and give the employees the benefit of the doubt, how can we assure that employees were even monitored for some of the isotopes they were supposed to -- I mean, you know, there's just -- there's a lot of opportunity, being an ex-DOE employee,

or a contractor employee, there's just a lot of opportunity for data to just not be existent and, number two, the data you go back to, the raw data from DOE, how can we -- how can NIOSH assure that that data was probably -- properly...

MR. ELLIOTT: Reported to us?

MR. GIBSON: Yeah, I mean, you know, as far as what's the minimum allowable of activity and everything else, you know.

MR. ELLIOTT: Well, certainly, yes, good -- good question and I appreciate the interest behind the question, Mike. We -- we have cross-checks that we employ on the data that's provided to us. We -- we can -- the health physicists can look at the -- that's why site profiles are important to us for these large DOE sites where a large number of people were monitored so that we understand how those monitoring practices changed over time. And the health physicists are required to understand those changes and to identify any trends or pervasive problems that -- that may exist in the data that comes forward from the Department of Energy, so that's one mechanism.

Another mechanism is where we -- we look at the distributions of data for a given site to examine whether or not over a particular period of time there looks like there's something unusual that has gone on and we pursue that with points of contact at the site. But also remark to you that the EEOICPA law recognizes that many people were not monitored, that monitoring records were lost, and that dose reconstruction has been brought to bear for those particular situations. And in that, NIOSH has consistently dealt with unmonitored dose, missed dose and dose that was never recorded for a variety of reasons. And so you can -- I'm sure you've seen that in our -- in the reviews of dose reconstructions that you've conducted.

But your point is very well taken with us and we -- we take it very seriously.

MR. GIBSON: But if I can just follow up, I mean do you guys consider looking at like Price Anderson reports and, you know, things like that that the DOE has -- the DOE contractors have to report regarding flaws in their bioassay and other monitoring data, the

radiation protection program?

MR. ELLIOTT: Well, those reports are looked at as -- as the dose reconstructor views the need to look at those reports. If something looks amiss, something looks out of -- out of -- out of kilter, then they'll go and look and examine those particular reports. They look at monthly and quarterly summaries, incident reports, et cetera. There's discretion to apply here where it's -- you know, where it's necessary to do so because a given claim would benefit from that, they certainly do pursue that level of -- of detailed investigation.

DR. ZIEMER: Thank you. Other comments or questions?

DR. WADE: I mean if I could, I'd like to follow up on Mike's question and point because I think it's so terribly important. This Board in its review function, be it a review of site profiles or the review of petition evaluation reports, is grappling with those very issues that -- that Mike mentions. It's a terribly vexing problem. And again, at times it's taken the Board's working groups literally months to try and grapple with these issues. They are

not trivial issues and Mike makes an outstanding point.

DR. ZIEMER: Thank you.

MR. GIBSON: Lew, if I could follow up -- and again, I just -- you know, I don't want to get on my soap box again, but you know, the site profiles were, for the most part -- and I've still never heard from my question from months ago, how many were generated by hourly or salaried workers in the field that were not management or in charge of the radiation protection program in some form or manner.

DR. ZIEMER: I don't know if that's a rhetorical question or an actual question, but --

MR. GIBSON: That's an actual question and it's a -- I guess it's a repeated request to get an answer to that question. You know, people -- people that had their -- their nose out there in the field, why aren't they site experts? Why are the site experts only the people that were in the radiation -- radiation protection programs?

MR. ELLIOTT: Well, Mike, everybody that worked at a site we consider to be a site expert.

That's why we felt it important to capture in an interview what experiences that Energy employee had. And I recognize that survivors are at a great disadvantage, but you know, I would answer your question that everybody who worked at a site we view as a site expert. As an industrial hygienist, I believe that the best story I can hear is the one from the guy who's working on a shop floor. He can tell me whether or not the procedures that were written for him are really workable and followable or not, does he have ways that he gets his job done without those procedures. And so that's why we felt it very important to use interviews to capture that on an individual basis.

I don't know, quite frankly, to answer your question, how many site profiles or Technical Basis Documents have been developed and drafted in the ORAU team by people who served as experts --

MR. GIBSON: Actual (unintelligible) --

MR. ELLIOTT: -- site experts or managers at a given site. We will see what happens as this conflict of interest policy is -- is -- will be applied and we'll see what changes result from

that.

DR. WADE: I mean Mike has asked this question repeatedly and -- Mike, this is Lew Wade. If you will work with me off-line, I think we need to put your question in writing and have it submitted. It's not an easy question to frame. I understand. I think many of us who hear your question understand the spirit in which it's being offered, but I think we need to put it in writing and then see to the best possible -- the best people's capabilities that we get you an answer to your question. I think it's best rendered in writing, Mike.

MR. GIBSON: Okay. Thanks, Lew.

DR. ZIEMER: Thank you. Any other questions for Larry?

(No responses)

Okay, it appears not. Thank you again, Larry, for that report.

DOL PROGRAM UPDATE

Let's move on to the next program update which is from the Department of Labor, and Jeff Kotsch is here today and, Jeff, I'll turn the podium over to you.

MR. KOTSCH: Good afternoon, all and -- good

afternoon, all, and I'd like to thank the Board for the opportunity for DOL to give an update. Pete Turcic, our Director, is tied up in a DOL management meeting in Philadelphia so he's -- so I'm here instead.

And just a quick overview of what Labor does as far as cases that involved the Energy Employees Occupational Illness Compensation Program Act. The part the we're interested in here comes from Part B, which became effective in July of 2001, and to date -- and most of these slides are dated -- or have information as of September 11th, and unfortunately a lot of our numbers -- you'll see discrepancies, or at least differences with NIOSH's numbers, partially due to the time we take the snapshot of the data, partially due to the -- the tracking mechanisms that are inherent in both the system that NIOSH uses and the system that Labor uses. We've had continuing efforts to try to match -- or better integrate these numbers and coordinate the numbers, but unfortunately we're not always successful or at least -- in trying to keep them in the same -- same step.

To date we've had 53,583 cases from -- which involve 76,540 claims. Just again, there are always more claims than cases because cases involving survivors, such as children, will always generate a -- or may have more than -- two or more children. We've had 34,346 cancer cases and have referred 22,260 cases to NIOSH. Now on the Part E side, this is the program we inherited through an amendment to the Act which was enacted in October of 2004, this is part of the program, Part D -- I mean Part E, which is the Part D from the Department of Energy and on that side, and this is the toxic chemical side of the program. B is primarily cancers, silicosis claims for the miners and the tunnel workers at Amchitka and Nevada Test Site, the beryllium -- chronic beryllium and beryllium sensitivity; and the RECA program, the Radiation Exposure Compensation Act, which comes out of Department of Justice that we augment based on the Act.

Getting back to Part E for October of 41,474 cases, there are the number of claims, we carried over from the DOE program -- or they provided to us 26,547 cases, basically on the

effective date, which was June 2005. And since then we've pretty much gone through -- we had a target to try to get -- sift through at least 75 percent of those cases as far as initial work getting those process -- in process and reached that goal a few weeks ago.

To date -- again, September 11th -- Department of Labor has provided $2.1 billion from total compensation. The Part B program is $1.7 billion of that, the Part E program is $456 million and you see the other breakdowns. The other portion of that are the medical benefits that we provide to the living employees and that's, to date, $122 million.

As far as the payees go, total has been about 24,500 for total payees under the Act. The bulk of those, 20,800, are Part B payees for -- mostly for cancers -- cases, but also included in there but not shown specifically are the beryllium diseases -- or chronic beryllium disease and beryllium sensitivity and silicosis claims. The distri-- and again, in there are the RECA and the cancer cases. And the Part E payees were 3,700.

As far as --

DR. ZIEMER: Jeff --
MR. KOTSCH: Yeah, sure.
DR. ZIEMER: -- excuse me, could you speak a little louder? I think some in the audience are having difficulty. Maybe -- I don't know if you can get that mike up to you or -- do we have a lavaliere mike available?
MR. KOTSCH: I'll just -- I'll just get closer. Part B cancer case status, to date 52,154 claims have been filed on 34,346 cases. I was -- I was going to work this from the bottom up, just to -- and provide a brief overview of the way the program works. If you look at the bottom, we've got about 2,900 cases that are pending DOL initial action, so these are cases that come into the program, into the District Offices -- the four District Offices scattered around the country -- and have to have initial development. They have to determine -- the claims examiners have to determine whether there is a -- in the case of a cancer, whether there is medical evidence to support the cancer, whether there's employment to a -- to a covered facility, whether it be a DOE or an AWE facility, whether there is the appropriate

survivor information if it's a survivor claim. When we send the claims to NIOSH, and currently we've got about 6,300 claims at NIOSH -- or cases at NIOSH, then NIOSH does the dose reconstructions and the next level there is 2,436 cases with recommended but no final decisions. These are cases that dose reconstruction has been returned, the claimant has it in their hands, the District Office has rendered a recommended decision. At this point the claimant has the opportunity generally, if it's a denied case, to appeal the process -- the first appeal in the process where they can object to the recommended decision and either ask for a review of the written record by the FAB, which is the Final Adjudication Branch, which is separate from the District Offices, or ask for a hearing to present additional information that they feel is necessary that Labor hear to decide whether they -- sub-- submit that information in -- as an objection to the case. That information is incorporated in the final decision that's rendered by the Final Adjudication Branch and results in the final decision, which -- which we have 22

thousand and about 800 of those cases to date. And the way that they -- the cases distribute that average final decision, there is 8,297 acceptances and 14,503 denials. And the breakdown next to that primarily shows -- the biggest component of the denials are POCs generated by the dose reconstructions of less than 50 percent. Other categories are non-covered employment -- they're not a -- we couldn't verify employment at a DOE or an AWE facility; insufficient medical evidence to support the cancer claim -- these are all the cancer cases; and ineligible survivor is a minor component; and other, which is primarily still the fact that they have -- do not have a covered cancer. They may have had another medical condition which initially in the program wasn't addressed by the program but now under Part E can be addressed -- a non-- a non-cancer condition.

We're showing -- well, again, based on our statistics from our program -- that we've referred 22,260 cases to NIOSH. We've had -- we're showing 16,480 returned. A number of those have -- were withdrawn, like -- like

Larry mentioned, for different reasons. Sometimes we continue to review -- District Offices continue to review. They find that the case is no longer supportable. Maybe an employee died, there's no more survivors, maybe the cancer condition that was there was -- for some reason additional development continued and they could no longer support that, or employment issues were raised, for whatever reasons. So we're down to 15,128 dose reconstructions which have been returned. This rework number is different, radically lower than the NIOSH numbers. And since I'm one of the two people that basically send the reworks to NIOSH, that -- our number looks lower than what it seems like I do -- that we do every week. And we still have, at least in our records, showing about 5,800 referrals at NIOSH. So with number 14,377 with dose reconstructions, 11,000 -- about 11,700 have resulted in final decisions and 1,783 have resulted in --

DR. WADE: You're going to have to hold the mike closer and speak more clearly, or maybe even a bit slower, if you don't mind.

MR. KOTSCH: All right.
DR. WADE: We're having trouble. Just hold it real -- maybe an inch or so from your mouth.
MR. KOTSCH: Is that better now?
DR. WADE: Yes.
MR. KOTSCH: Sorry, I should have done that -- sorry, I should have done that earlier. So anyway, we're showing 14,377 cases with dose reconstructions, of which about 11,700 have resulted in final decisions; 1,783 are at the recommended, but no final decision stage; and we're pending about 900 cases in the process of a recommended decision.
And this slide is just a breakdown of those 11,582 final decisions as far as the approvals, which are about 3,371 and the denials about 8,200, and a distribution also of whether they're specified or non-specified cancers.
The general number -- it seems across the board that both NIOSH and we have found is split -- generally is specified cancers -- those in that category run about 60 percent of all cancers, you know, of that type.
Now under the new SEC related cases, here again this number's different. We're showing 884

withdrawn for SEC reviews. This is -- these are just on basically the first six SEC classes, the two Mallinckrodt classes, the two Iowa Ordnance classes, the early Y-12 -- the 1943 to '47 SEC class; and the Linde Ceramics class. From these we're -- we've had 690 final decisions, of which 592 have been approvals. I'm not sure of all the basis for the denials that are there, but probably a number of them are related to the fact that they probably did not have 250 day-- or did not meet the 250-day requirement and then went back -- or remained in the -- the dose reconstruction process; 171 cases are in the recommended but no final decision process, and 23 are pending -- have been received by the District Office and are pending the writing of the recommended decision.

I forgot to mention before, it's at that stage where we are pending -- you know, as the recommended decision is written, that's where the bulk of the reworks come, when they come, and go back to NIOSH. And again, as Larry mentioned, the bulk of them are because of -- at that point in time as the -- as the claims

examiners are reviewing the case, they find -- they may find evidence of additional cancers, and they find evidence of additional employment for -- these are for non-compensable cases -- or other additional survivors, which really doesn't impact the dose reconstruction as much as just providing the opportunity for those survivors to have a -- have an interview and determine whether there will be anything significant to affect the dose reconstruction. NIOSH cases related to compensation, we have paid $572 million out to 5,420 payees in, again, 3,825 cases. From dose reconstruction cases, that's $487 million to about 4,500 payees and another $85 million for the new SEC classes. These are the non-statutory ones after the Act, in 571 cases.

These last couple of slides are just information on three of the SECs that are going to be discussed this week. They're not -- Larry, in his slides, had the actual number of cases that are affected. These are cases that to date have been -- been through the process and resulted in final decisions in -- in some of the cases. ORINS is the Oak Ridge Institute

for Nuclear Studies, 59 cases. NIOSH has worked 21 to DR. We've gotten final decisions on the Part B side for 24, approvals for eight on the B, six separately on the Part E side, and then a total compensation of $1.4 million. For LANL, that's whole -- 20,077 (sic) cases, 388 dose reconstructions by NIOSH, 1,490 roughly final decisions under Part B, 183 Part B approvals, separately 161 Part E, and about $24 million in compensation there.

And then the S-50 thermal diffusion plant, 23 cases, five dose reconstructions, eight finals on the B side, three approvals on the B side, three on the E side, and then $700,000.

And then the last slide is Nevada Test Site and Pacific Proving Ground -- and again, those are just the numbers of cases that have been done through, in this case, September 9th. So 241 cases from Pacific Proving Grounds, 12 were worked -- 12 dose reconstructions were worked by NIOSH, 143 decisions for Part B -- primarily a lot of them on I think on employment or (unintelligible) kinds of things, covered facility type of thing; Part B approvals, 13; separately ten for Part E to -- to result in

$2.6 million in compensation.
And then at the Test Site, 2,442 cases, 672 DRs, final Part B decisions of 1,577, 749 B -- B approvals, another 160 Part E approvals for $38 million.
And -- that -- that's blank. Anyway, that's it. Any questions?
DR. ZIEMER: Thank you, Jeff. Let's open this for questions. First Mark Griffon.
MR. GRIFFON: Jeff, going back to the question on the reworks, I was -- I was wondering if you can tell us, from DOL's perspective, what -- what are some of the scientific or technical reasons that you've had in mind when you asked NIOSH to do reworks. I'm not talking about an additional cancer, but some of the scientific or technical reasons.
MR. KOTSCH: Well, early on we were saying we would see some objections -- I think Larry mentioned it -- as far as say Bethlehem Steel where we're getting ingestion questions on them -- on that before we -- the site profile was redone. We had similar questions as Savannah River Site on ingestion I think before that -- well, I guess that one's still in the process,

but early on for that. I think we had a couple at Iowa Ordnance, ingestion or on-site consumption of water. The -- you know, the objection was made that, you know, exposure pathways were -- were present for those -- for those people and we -- we considered that reasonable as far as a technical objection goes from -- from the claimants.

We have other ones where occasionally we -- we -- and I'm trying to just think specifically, but where we -- oh, we look at the procedures, the TIBs that drive their dose reconstructions and we don't -- we -- we're not -- sometimes we're not sure exactly how they arrived at the calculation and we just go back for clarification.

What I need to do is maybe next time put together a list of some of those things. We've done that informally, not just -- and I'm drawing a blank as far as reasons, and there are not that many total technical ones that drive us towards reworks as much as, like I said, the other types of things that drive us towards rework. But we can put that together 'cause that -- we informally exchange that with

NIOSH anyway.

DR. ZIEMER: Dr. Melius.

DR. MELIUS: Yeah, that would be helpful if you could bring that back to this next meeting. The other issue that came up -- and again, I'm not sure you're ready to answer, but we'd asked Pete Turcic I think at the last meeting if he would -- some of the issues that came up with defining the classes within the SEC and -- you know, sort of employment classification issues and so forth, and we were looking for feedback on that also and --

MR. KOTSCH: Yeah, I --

DR. MELIUS: -- it might be too early.

MR. KOTSCH: Let me remind Pete. We'll work on that one, too, for the next meeting.

DR. MELIUS: Yeah, it would be helpful. Thanks.

DR. ZIEMER: Any other questions --

MR. GIBSON: (Unintelligible) question, too.

DR. ZIEMER: -- comments? Dr. Wade?

DR. WADE: I'd like to make a -- just a general comment.

MR. CLAWSON: It sounded like Mike had one.

DR. ZIEMER: Hang on, Mike, just a second.

DR. WADE: Just following up on Mark's question, I think it might be very appropriate when the subcommittee on dose reconstruction meets next to ask DOL to come in with those numbers 'cause I think that's very valuable information for the subcommittee to consider in terms of the overall quality of the program. So I think we should try and schedule that as part of the agenda.

DR. ZIEMER: Thank you. Mike, did you have a question?

MR. GIBSON: Yes, Paul.

DR. ZIEMER: Go ahead.

MR. GIBSON: For Mr. Kotsch, also, you know, just as a follow-up, under subpart E when they make their determinations, they're still basing them on DOE records, I guess, you know, and that's the whole point of this program. The Department of Energy, whether it's radiation exposure or toxic exposures, you know, then-Secretary Richardson admitted they had not properly monitored workers. So how -- how are they making determinations under even subpart E when there's obviously -- it seems to be obviously -- a lack in full and -- and -- full

records.

MR. KOTSCH: For the -- for the Part E program we're -- we're doing a number of things to determine what toxic materials were present at the sites, including creating what we call site exposure matrices which are kind of clo-- somewhat like site profiles that NIOSH uses. We have a contractor that goes out with us to the different sites. We have tabletop meetings with the workers that -- we obviously start with (unintelligible) available from DOE or if there's decommissioning or other kinds of work that was done at the sites, we pick up that information, too, but we get information from the workers as far as what they think they were exposed to. We get the -- the MSDS sheets. I know they're more recent, but they do project backwards somewhat as far as what materials were present at the sites. We often assume that a number of materials were present at most of the DOE sites, and of course Part E is applicable only to DOE sites, you know, and so we consider things like asbestos to be ubiquitous to all -- all sites, basically, as well as a number of the normal -- what you

might consider the normal range of chemicals, the (unintelligible) series, the other solvents that were used, things like that. So there's a number of inputs that are being assembled as -- and we're not done with all the sites by any means and will continue to update the databases on the toxic materials that are present at those sites.

DR. ZIEMER: It appears that Mike may be asking also, in the absence of either any exposure information or questionable exposure information, do you assume that a given worker therefore was exposed to those things that were on site? Do you make a -- something equivalent to the claimant-favorable assumptions that NIOSH does in --

MR. KOTSCH: Yeah, I -- it's not me, but we do have industrial hygienists and toxicologists on staff, and then (unintelligible) who look at all these things, and it's a little more subjective than the B side, it's not quite as quantitative, but yeah, I think they're leaning us towards assuming that the materials are present and then determining, if they can or as best they can, whether there's potential --

MR. GIBSON: I guess --

MR. KOTSCH: -- for causation.

DR. ZIEMER: Mike, go ahead.

MR. GIBSON: I guess I'm asking and -- and Dr. Ziemer I think tried to get a -- an answer, but I didn't really hear a positive answer. Is it claimant favorable that if those substances were at the site, how do you determine or are you claimant favorable that those employees were exposed to that substance?

MR. KOTSCH: Again, we can probably speak to this better at a next meeting if -- some of you -- I'm not as conversant on Part E, but -- as far as how we're actually implementing the program, but I think it -- it is tending to be claimant favorable if they are -- you know, if it's determined that -- you know, if there's -- if there's some evidence that the material was on that site.

DR. ZIEMER: And perhaps that could be followed up, but it, in a sense, is outside of our jurisdiction but it does relate I think, philosophically at least, to how programs are administered.

DR. WADE: While it's outside our jurisdiction,

I -- I mean I think an answer at the next meeting would be appropriate.

DR. ZIEMER: Further comments or questions?

(No responses)

Thank you, Jeff, for that update. We appreciate it.

DR. WADE: You want a break?

DR. ZIEMER: We will take a 15-minute break. I want to remind folks if -- there -- there is a public comment session today at 5:00 o'clock. If you would like to participate in that, please be sure to sign up on the sign-up sheet in the foyer. We'll reconvene at 3:15.

(Whereupon, a recess was taken from 3:00 p.m. to 3:20 p.m.)

SCIENCE ISSUES

DR. ZIEMER: We're ready to reconvene our session. If you would take your seats, we will proceed.

(Pause)

Thanks, Joe; thanks, Mike; thanks, Richard for sitting down rapidly.

We're now going to consider a number of issues under the category of science issues, and Brant Ulsh from NIOSH is going to make the

presentation. Brant, thank you. You may proceed.

DR. ULSH: Thank you, Dr. Ziemer and members of the Advisory Board. Do I need to hold the microphone in my hand or can you all hear me clearly?

DR. ZIEMER: Maybe -- maybe bring it up a little bit.

DR. ULSH: Looks like I'm going to have to walk and chew gum at the same time.

DR. WADE: Yeah, hold it real close. Hold it close.

MS. MUNN: And maybe dance.

DR. ULSH: I'm going to talk about a number of issues that fall under the umbrella of science issues today. Ordinarily you might hear this presentation from Dr. Neton, and as Larry mentioned earlier, we certainly all wish him a speedy recovery. I would like to echo that. Dr. Neton is -- you know, I consider him a friend, and so I send out thoughts of him on that basis, but I also have a lot of purely selfish reasons to wish him a speedy recovery. I'm finding out over the past couple of weeks just how much of a load Dr. Neton normally

carries on his shoulders, so I wish him a speedy recovery.

So there are three primary topics that I'm going to cover today, the first of which is a general coworker methodology and how NIOSH applies that methodology. The second is related, and that is the construction/trade worker TIB. And finally I'll give just a brief update on a couple of items of scientific interest, oro-nasal breathing and ingestion.

All right. First of all, the general coworker methodology. One of the other things that I've been involved with lately is the Rocky Flats SEC petition, and this issue has come up in that context, but it's not only limited to that context. And the reason that I want to give just some general words on this, I think the concerns that we've heard expressed in the context of the Rocky Flats situation are also concerns that we see from workers at other sites about how do we go about applying coworker data to unmonitored individuals.

So first of all I want to tell you when we might apply coworker data. First of all, the first two bullets here show situations where

workers are either unmonitored, they have no monitoring data at all; or monitoring is incomplete, there are gaps in their monitoring records. And in those situations we might consider coworker data.

That's not necessarily a given because we have other strategies -- dose reconstruction strategies that we can employ. We have some overestimating approaches we can use, and we also have underestimating approaches that we can use.

The situations where we would resort to coworker methodologies are when the overestimating techniques and underestimating techniques that we have are not appropriate. And an example might be we typically apply overestimating approaches when the claim does not look like it's going to achieve a probability of causation of 50 percent or greater. If we overestimate it and the probability of causation is still less than 50 percent, then we can consider that claim complete. On the other hand, if we apply those overestimating approaches and it results in a probability of causation above 50 percent,

well, then that approach is not appropriate and we might have to resort to coworker data in that situation.

And of course all of this is predicated on the existence of suitable coworker data for a site.

All right, I want to spend a little bit of time on this first bullet because I think this is one of the biggest misconceptions about what we do when we apply coworker data in dose reconstructions. And first I want to talk about what we do not do.

We do not take data from a monitored worker, an individual monitored worker, and apply it to an individual unmonitored worker. That has to be done very, very carefully. You have to be comfortable that those two workers did similar duties and received similar doses, and we don't normally have the degree of comfort that would let us do that. So I -- I know that some people think that that -- that that might be what we would do, that we would take monitored data -- data from a monitored person and apply it to an unmonitored person. We do not.

To make sure that we are being claimant favorable in applying coworker approaches,

instead we look at the distribution of monitoring data that exists from all workers at a particular site for that particular time period.

So to put this into more concrete -- concrete terms, if you think of a site like perhaps Hanford where you have a number of people who are monitored, thousands of people who are monitored in a particular year, say -- I don't know, 1966. If you have an unmonitored worker in 1966, a person who was not monitored, and on DOE sites these tend to be people who had lower exposure potentials. Now I don't want to over-generalize that statement. But in general, at least at the DOE sites they made an attempt to capture the most exposed people in their monitoring programs.

So we look at the distribution of everyone who was monitored for a particular period, and we pick a claimant-favorable percentile value. And what I mean when I say that, usually we use the 95th percentile unless we have some pretty solid evidence to use another value. So in true scientific fashion you might ask well, okay, now we've got a situation, we've got a

technique set up; let's try to poke some holes in it, so where would this be inappropriate to apply coworker data with this methodology? Well, first of all, the unmonitored worker would not only have to have received a significant dose, but he would have had to receive a dose that was higher than 95 percent of the monitored population. And that's why we pick that 95 percent because that's really not a very credible scenario, in most cases. The monitored people tend to be the process operator types, and so they've received the highest doses at the sites and we further ensure that by using the 95th percentile.

Okay, now to a more specific example of this. I've been talking in generalities. This is a topic of great interest to certainly a subset of our claimants, and this is the construction trade workers, and we have just issued -- just finalized TIB-52, and so this is a subset of unmonitored workers that we're attempting to come up with some methodologies that would let us perform their dose reconstructions.

Now the purpose of this TIB is to -- I'm sorry, TIB, Technical Information Bulletin. The

purpose of this TIB is to allow us to perform dose reconstructions for unmonitored construction and trade workers, and I'm going to talk to you right now about who that includes. Here's a list of about a dozen job titles that characterize the construction trade workers. (Unintelligible) from laborers, mechanics, pipe fitters -- I'm not going to read through the whole list, but there are about a dozen there. And as Larry told you before the break, we have about 4,120 claims from construction trade workers. We've completed dose reconstructions on about 3,200 of those, and about 900 are still awaiting a dose reconstruction. So this is a sizeable group of our claimants.

Construction trade workers could have worked on a DOE site at any time period. We haven't limited this to any particular years. And they could have been employed by an M&O or by prime contractors or even subcontractors, and they may or may not have been monitored.

We have several sources of data available to us to come up with the methodologies that we're going to use to do dose reconstructions for

these folks. At Rocky Flats we had electronic databases for both internal and external. And similarly at Savannah River, we also had that data; the three sites in Oak Ridge, and also at Hanford. And for the Idaho National Laboratory we had external data. And when I say this, I'm not saying that there aren't data for other sites. I'm only saying that this data was available to us in readily-retrievable time frame to allow us to conduct -- or to construct this coworker TIB.

Okay, first of all, external data. I know most of the Board members and -- this might be new to you. When we talk about external data, we're talking about radiation that you receive from sources outside of your body. We looked at data for the construction -- the subset of workers who are construction trade workers, and we also looked at the external data for all monitored workers. That includes the construction trade workers and others. And we took the ratio of the construction trade workers, the CTWs, and compared those to the all monitored workers, AMWs, at the 95th percentile because that's going to be at the

most relevant metric for this TIB and we wanted to ensure we were being claimant-favorable to the CTWs. And we plotted this ratio on an irregular basis.

Well, that didn't turn out too bad. Okay, there's a lot of things on this slide that I want to make sure and point out to you. First of all, this is dose that is aggregated over five different sites. Those five sites are the three sites in Oak Ridge -- X-10, K-25 and Y-12 -- and also the Savannah River Site and the Rocky Flats Plant. And this shows the external dose at the 95th percentile across the years of operation of those sites. And if I don't push the wrong button -- here we go. This curve on top with the circles represents all monitored workers. The curve on the bottom with the Xs represents the construction trade workers.

And one thing that I want to point out to you is this line right here (indicating). We had a lot of data available, 200,000-plus dosimetry histories for construction trade workers and over a million for all monitored workers. So we had extensive data available to us.

Another trend that I want to point out to you

is in the early years there's some bouncing around, but you see a general decline in external dose as we approach the present day. And also, at least for this aggregate data, you can see that in general -- and there are a few years that are exceptions -- but in general the all monitored workers are above the construction trade workers. Now there are certainly a few years here that that is not true, and that's what we were concerned about. We want to make sure that we are claimant-favorable to the construction trade workers, so we were particularly interested in those particular years where the all monitored workers did not bound the construction trade workers.

Oops -- uh-oh, I'm going to have to put this down and go back.

(Pause)

Okay. We used this data, the data that I just showed you in the previous slide, to determine an adjustment factor. And this is a factor that we're going to apply to the all monitored worker data to ensure that we're being claimant favorable to the construction trade workers.

And we looked at those few DOE sites where that ratio of construction trade workers to all monitored workers was greater than one, and those represent the situations where the construction trade workers had higher dose than the all monitored workers. And we looked at that prior to 1961 because, as I showed you on a previous slide, that was the years of highest exposure for the worker populations. During the later years the doses were actually significantly lower.

Now the maximum value that we observed for that ratio in those years was approximately 1.4, and what we propose to do is to apply that 1.4 adjustment factor to the all monitored workers at a particular site. Now this I -- this I want to emphasize. If you -- if we have an unmonitored construction trade worker from say Fernald, we are going to take the coworker data from Fernald and apply this 1.4 adjustment factor, just to make sure that we're being claimant favorable to the construction trade workers.

Now the internal dose side. This is from material that has gotten into your body, either

ingested, inhaled or injected through wounds. What we found here is that the construction trade workers and the all monitored workers were very similar in almost all cases; similar enough that we were comfortable using all monitored workers to apply to the construction trade workers.

Now the exception is Hanford. I see Wanda's ears perking up already. At Hanford the construction trade workers seldom were included in the routine bioassay program. More frequently the construction trade workers received bioassays in special situations where an intake was suspected. And so that -- that fact led us to conclude that using the construction trade worker -- the construction trade worker data at Hanford would be biased high. So we wanted, again, to ensure that we were being favorable to the construction trade workers, we proposed to -- at Hanford -- multiply the coworker data by a factor of two to make sure that that adequately bounds the construction trade workers.

Okay. So the guidelines that OTIB-52 provides for conducting dose reconstructions for these

individuals is to apply an adjustment factor of 1.4 for the -- for the external data, and to use -- also we're going to use the 95th percentile unless there's very compelling reason to use something different. And again, that is going to be applied to the site-specific coworker data.

We're going to use the all monitored worker internal data to apply that to the construction trade workers, and for Hanford we're going to double the results of the internal coworker data.

So to summarize, we now have this -- this table's been finalized and issued, and so we're going to begin to process cases using this TIB for those approximately 906 construction trade workers who are awaiting dose reconstruction.

Okay, just very briefly in these last few slides I'm going to tell you about a topic -- a few topics that we are currently investigating. So I don't have results to tell you about, I just have a status report for you.

Okay, I guess the first, most obvious, question is what in the world is oro-nasal breathing. These are two topics that came up in the

context of the Bethlehem Steel site profile review, and oro-nasal breathing -- well, I'll get to that on the next slide. I'm getting a little ahead of myself.

We came up with a temporary -- I don't want to call it a temporary, but a limited solution for these issues at Bethlehem Steel, but we recognized that this is an issue that's not limited to Bethlehem Steel. And so we have been working on a resolution for those other sites other than Bethlehem Steel.

So first of all, oro-nasal breathing. The ICRP, which is the expert -- international expert body dealing with radiation protection, they describe about 85 percent of the population as nasal augmenters. And what that means is that 85 percent of us breathe mostly through our mouth -- most of us are mouth breathers, but especially when activity levels increase we start to supplement our breathing through our nose, so this is what oro-nasal breathing is. Fifteen percent of us are pure mouth breathers. So ICRP has issued a lung model, ICRP-66, and those parameters in that model are affected by such factors as the

breathing rate, the breathing mode, and particle size -- particle characteristics. When we look at standard-setting bodies, bodies that set dose limits, they typically do not consider mouth breathers because they're a small percentage of the population. Well, again, we want to make sure that we are adequately capturing the uncertainty in internal doses, so we are certainly interested in the impact of oro-nasal breathing on our internal dose reconstructions.

Now just to give you an example -- I know you probably can't see the details here, but just to give you an example why we might be interested in this, this left panel shows nasal augmenters -- that's 85 percent of us -- and you can see that for the pure mouth breathers it's a little bit higher in some situations. So again, we do have reason to want to make sure that we are not underestimating anyone's internal dose.

Okay, the next topic -- the last topic -- is ingestion. Now this is one of three modes of intake. In other words, how can I get radioactive material inside my body. Well,

one, I can inhale it. If it's a dusty environment like a uranium -- where they're machining uranium metal, it generates dust; I can inhale that. That's one method.

I might be unfortunate enough to get a splinter of radioactive material in say my finger. That's injection. That's the second method.

This is the third method. If I get dust on my hands and I rub my lips and then I lick it, swallow that, that's ingestion. I might eat contaminated foodstuffs. My lunch was sitting out and the dust -- radioactive material settled on my sandwich and I ate it. This is ingestion.

So this is the next issue that also surfaced during the Bethlehem Steel site profile review that we are interested in. Now typically in a laboratory setting this is not a large source of intake, but the same cannot necessarily be said of AWE employers because there were far less rigorous controls at the AWE employers, so we're very interested in this issue in particular for those types of operations. And we have addressed this ingestion issue on specific case by case bases in our TIBs and our

TBDs, but we recognize that we need to come up with a more cross-cutting approach to this issue.

So for both of these issues we are evaluating their impact on our dose reconstructions. We are working with our contractors at EG&G to look at both of these issues, to conduct comprehensive literature reviews -- and that'll be one product, is the literature review. I think we anticipate completing that by the middle of October. And then hopefully by the end of this year we'll follow on with technical reports that deal with both of these issues. And that is the end of what I have, so I'll be happy to entertain questions.

DR. ZIEMER: Thank you very much, Brant. Let's open the floor for questions. John Poston.

DR. POSTON: Brant, there's -- I see another reason that Jim Neton should hurry back.

DR. ULSH: Uh-oh.

DR. POSTON: Nice presentation.

DR. ULSH: Thank you.

DR. POSTON: It seems to me that, even though you tried to separate these into several different categories, that your ingestion and

your mouth breathing are really two horses in the same garage, as my advisor used to say -- I had not a clue what that meant, but anyway -- because if you breathe through your mouth, the most likely pathway is ingestion, not inhalation, for the materials that you take into your -- into your mouth. So have you given some thought or -- to that or are you really going to try to separate these into two -- two issues?

DR. ULSH: We certainly have given that some thought; thank you, Dr. Poston. I certainly don't have the internal dosimetry expertise of Dr. Neton, but I -- I do understand that the ICRP-66 model does also include for the mechanism of ingestion. When materials are inhaled, some of that, especially the larger particles, are -- they come back up through the tracheal bronchial pathways and they are swallowed and ingested, so that is certainly a consideration that we are keeping in mind as we approach these issues.

DR. POSTON: And this can be a yes or no question. My recollection was that ICRP-66 included considerations for things like mouth

breathers, pregnant women, those kinds of things -- people that didn't breathe normally, let's say -- as their reference person. Is that correct?

DR. ULSH: I think that is correct. Perhaps it wasn't -- it was a little less clear than it should have been on my slide. ICRP-66 does include those kinds of parameters. However, in standard-setting bodies, as I understand it, don't typically explicitly consider mouth breathers.

DR. POSTON: Do you anticipate any change in the particle size considerations, because that was one thing that the ICRP did, they went from one micron to five microns in their new model, and that certainly impacts the distribution of the particles that one would inhale and the -- the whole respiratory system.

DR. ULSH: I think that is certainly an issue that we're going to consider in our evaluation. We tend -- we tend to be very careful about crossing ICRP. If we depart from ICRP guidance we certainly want to have a good basis for doing that, so we're going to approach that issue very carefully.

DR. POSTON: And one final comment that doesn't require a response. It seems to me with these adjustment factors that you're proposing, you're bending over backwards to make it compensable, and so that seems to me you're really trying to work hard to -- to make the doses perhaps very fair and reasonable to the -- for the construction workers. Thank you.

DR. ULSH: Thank you.

DR. ZIEMER: Okay, Dr. Melius and then Dr. Lockey.

DR. WADE: Let Jim go first.

DR. ZIEMER: Okay, Dr. Lockey will go first.

DR. LOCKEY: I have a couple of questions. One, when you look at inhalation, in the nose two-thirds back it goes to the (unintelligible) pharynx and is swallowed -- in the mouth is swallowed and any large particles (unintelligible) permanently deposited and eventually are swallowed, too, through the endobronchial tree through mucociliary transmechanism, so the swallowing mechanism is going to take place nasal breathing, oral breathing and from the lower respiratory tract, so how do you take that in your model?

DR. ULSH: I don't know. You've just gotten so far down the route that I can't answer that. Sam Glover is our NIOSH internal dosimetry expert, and I would have to go back to Sam and get some clarification on that.

DR. ZIEMER: Probably John can answer this, but the lung models do assume a certain percent of clearance by swallowing and it's -- it's particle-size dependent. Those big particles come up the -- what's it called, the tracheal bronchial (unintelligible) --

DR. LOCKEY: Mucociliary, right. Well, the models include the consideration of the mucociliary escalator. They also include the macrophages and -- what about the upper airway, what about the two-thirds -- back two-thirds of the upper level goes back (unintelligible) pharynx.

DR. POSTON: That typically is -- would -- in the model, if it's particulates, then it would actually be inhaled, but some of it would be cleared to the -- to the gastrointestinal tract.

DR. LOCKEY: Well, the upper level clears your large particulates, so the large ones are going

to go to the GI tract.

DR. POSTON: Now the model that they use now in the ICRP-66 model is pretty complex. I'm not sure it's any better than the old model, but it's -- they do try to take all that into account.

DR. LOCKEY: I have one other question. On -- on the slide it looks at external dose aggre-- aggregated over five major sites. Can you pull that slide up for me?

DR. ULSH: Yes, sir. This one?

DR. LOCKEY: Correct. As I understand it -- I mean I looked at approximately 1960 and the construction worker estimates there really dropped down in 1960. Are you going to apply the 1.4 factor -- how are you going to apply that (unintelligible) 1960?

DR. ZIEMER: We are going to apply the 1.4 factor across all years. Now one thing that I want to point out here, Dr. Lockey, is that this is aggregated data. And the reason that we are applying that 1.4 factor across all years is that if you look at the specific sites, the individual sites in individual years, that is the maximum -- that will ensure

that we capture -- bound the construction trade workers for those years. So in effect, this graph is -- it's aggregated the sites, but you do see individual years at individual sites where all monitored workers are not bound -- that they don't bound the construction trade workers. That's why we're going to apply that.

DR. LOCKEY: Well, nevertheless, if I was a AMW -- okay?

DR. ULSH: Uh-huh.

DR. LOCKEY: And from this graph, they have -- it would appear to me -- a significant greater exposure than the construction workers after 1960, how is that going to be taken by that -- the AMW workers? Because in fact what you're doing is assigning a higher dose to that period of time -- substantially higher dose based on what this graph shows -- in comparison to the regular workers on the plant site five seven -- five days a week.

DR. ULSH: So you're approaching this from the standpoint of a non-CTW saying how am I going to get -- how is that fair to me when --

DR. LOCKEY: Correct. I understand before 1960 because the data supports that.

DR. ULSH: Sure.
DR. LOCKEY: But after 1960, I just want to know how you're going to approach that question.
DR. ULSH: I understand. I'm fortunate enough to have Mel Chew, who is a subject expert on this particular TIB, and I'm going to ask Mel to field that question.
MR. CHEW: (Off microphone) (Unintelligible) try and understand the question again.
UNIDENTIFIED: (Unintelligible) the mike, Mel.
MR. CHEW: Thank you. Please ask the question again so I make sure I understand your question, Dr. Lockey.
DR. LOCKEY: Looking at this graph -- I mean I understand the rationale for the 1.4 1960 and before.
MR. CHEW: Yes, sir.
DR. LOCKEY: Okay? After 1960, at least based on this data, it would indicate to me that construction workers, based on available data, have substantially lower exposure than the other workers. If you're going to apply the 1.4 figure to the construction workers after 1960, if I was a AMW worker I would like some

explanation about that because what you're doing is then over-- you're saying the construction workers have substantially higher exposure than the workers at the plant site on a regular, ongoing, daily basis after 1960.

MR. CHEW: Okay, let me -- let me try to answer your question here. I think --

DR. WADE: Stick close to the microphone and keep it close to your mouth, please.

MR. CHEW: Maybe we should look at the graph. Brant very clearly said that this is a composite of -- of many sites here, and so in the first place, none of these particular values are not the real exposures for that particular site, but a composite of the sites. Huh? But it does show what you're -- you're asking about.

In the early -- prior to -- in the 1960 time period there was considerable amount of work with construction workers on those particular sites, like Hanford, Savannah -- and ORNL that basically the construction worker was working on those particular sites and did receive, you know, doses very similar to your unmonitored worker. Okay? And that's very clear.

One of the things that show that the construction workers came down very quickly and right after 1960 is a very interesting artifact, and we lis-- we studied that very carefully and it's -- at some of the sites in the early days they com-- they basically took some of the people -- they monitored the people who had the highest potential for exposure. Okay? So not everyone necessarily was badged in that particular time. For that -- tho-- 1960 period, many of the dosimeters were incorporated in the security badge, and so a lot of people were monitored. Right? Including construction workers who came onto the site and all monitored worker. Right? And so we do a composite of the data that -- it looks like the construction workers drop, but that possibly is -- that is due to the larger number of construction worker monitored which had very little (unintelligible) doses, and that explains the composite of the -- of the exposures here and so maybe I'm -- I hope I'm answering your question here.

DR. WADE: I'm not sure.

MR. ELLIOTT: If I could help you, if I could,

this graph a cumulative of all the dose for construction trade workers and all monitored workers across the DOE complex for those sites that we had readily-available data for. Correct?

MR. CHEW: Right.

MR. ELLIOTT: This graph is not going to be used to assign dose to unmonitored construction trade workers for a given site. We'll use the individual data from that site. And your question is still pertinent, I believe, because at some site-specific instances the all monitored worker data will be lower than what we would assign under a factor of 1.4, and so that I think is the root of your question -- the thrust of your question. Does that help?

MR. CHEW: Can I --

DR. LOCKEY: Yes.

MR. CHEW: And I think when you see the individual sites in the OTIB, when you get a chance to look at it, then I think that makes more sense because, as I said, this is a composite of...

DR. ZIEMER: But what Dr. Lockey appears to be asking is if I'm an unmonitored worker who is

not a construction worker and I get the -- do I then get an assigned dose that is less than a construction worker very clearly for -- if -- if there's a construction worker that same year at the site and his dose now is assigned at some value, say it's 150, and do I get assigned 100, even though looking at the data it says it ought to be the other way around is what you're saying.

MR. CHEW: Yes, I think -- I think --

DR. LOCKEY: That's correct --

MR. CHEW: Oh, that's --

DR. LOCKEY: -- that didn't -- doesn't seem to be...

DR. ZIEMER: Or why don't I get a higher dose assigned since my construction worker colleague got a certain value.

MR. CHEW: I think, Dr. Ziemer, (unintelligible) asking you, this is a good comment. The previous scenario that the unmonitored construction worker could -- because of the artifact that we're applying the 1.4 -- get a higher exposure assigned to him or her over the all monitored worker. I think that's your particular point. Yes, again, that

is true and -- and that -- that's something I think NIOSH is prepared to accept, right?

DR. ZIEMER: Well, let me add to that comment. I -- I believe that under the NIOSH approach, both workers get an exceedingly generous assignment of dose.

MR. CHEW: Right.

DR. ZIEMER: One appears to be more generous than the other, but nonetheless --

MR. ELLIOTT: It is something we are aware of where we -- we've recognized this anomaly, we're not sure -- as we apply this we'll be monitoring when and where this particular scenario presents itself. We're going to have to look at that in greater detail. But in order -- the tension here is trying to treat a number of claims where we have no data, and do so as expeditiously as possible. And as we proceed with this, we're going to have to examine that closer.

DR. ULSH: One more point, one more perspective perhaps, that comes to bear on this is that it's certainly true that there are individual situations where we will be giving a higher dose to the CTWs than the all monitored

workers. But we felt that we had to do that to ensure that there was no case where we were shortchanging the CTW, so that was -- that was why we concluded that we really needed to do that.

DR. ZIEMER: And Dr. Melius, did you have a follow-up?

DR. MELIUS: Yeah, have a number of questions. This exercise you went through, this TIB is based on I believe six sites where you had data. True?

DR. ULSH: We actually had seven sites. This particular graph shows five sites.

DR. MELIUS: Okay, and so forth. And what is the problem at the other sites?

DR. ULSH: I'm glad I've got Mel standing beside me because I'm going to let him --

DR. MELIUS: Either one of you can answer, I don't (unintelligible).

DR. ULSH: Okay. These -- these seven sites, five on this graph, were the sites where we had the data in a form that -- that was readily retrievable. And also these sites represent a wide spectrum of activities across the DOE spectrum, so they represent production sites --

like, for instance, Rocky Flats and Hanford. They also represent national labs, like for instance ORNL. So we wanted to capture the sites that represented the range of activities across the DOE complex.

Mel, do you have anything to add to that?

MR. CHEW: Yeah, I'd like to (unintelligible) that was a very good question. These sites were selected, in addition to what Brant is saying, they have available information that we can pull construction worker out of the -- the general data point. But they were also -- you look at -- these are the big sites that major activity -- you know, Hanford clearly with the reactors and separation, Savannah River, INEL is in there, Y-12 and K-25. And those we felt -- we went after that particular data because there was a lot of construction work being done in those early years and represented what we felt was (unintelligible) -- or represented at least to do the comparison, and I think (unintelligible) real point to Larry, when it really comes down to actually doing the dose reconstruction for an individual site not on the list, that particular information available

for that site will be used.

DR. MELIUS: Yeah, okay. Did -- as part of this effort did you make any -- try to do any comparison or look at the type of job duties or work that was done by the monitored versus the unmonitored workers -- construction workers, and did you do any breakdown by type of work, or is everything just lumped and you're just using what -- it just purely, you know, an exercise based on what monitoring data's available?

MR. CHEW: I think there was a slide that we were pulling out information with who people were construction trade workers, clearly. And I think even in some of our early presenta-- well, not this presentation -- we can even go down to the subset like, you know, looking at laborers, pipe fitters and painters here. So construction workers were -- clearly tried to be identified, not only if they had worked for a subcontractor that came into the site -- you know, it was contracted -- but they could have been working for the prime or M&O contractor doing construction work. And so going back to the dataset to identify categories of people,

department and job descriptions was all part of this data analysis.

DR. MELIUS: But aren't you making an assumption that to some extent the monitored are the same -- and the unmonitored workers are -- fall into the same general type of work as the monitored?

MR. CHEW: Yes, I think that's -- that's --

DR. MELIUS: And did you do any sort of analysis to try to -- did you look at the type of work that they did, the -- the contractor that they worked for, any...

MR. CHEW: Yes, to -- you know, to some qualitative level here, especially at those particular sites where we saw high exposures to con-- to construction workers we tried to identify what activity caused that. And so to -- I'm trying to answer that question, example like at Hanford, I think Wanda can attest to that in the early years when the -- both the reactors and the separation facilities were going on, there was a considerable amount of construction because of the changing processes at Hanford while construction workers were still doing that particular work, the

processors were operating. So we try to identify when we see certain types of -- the doses when we see by construction worker, we went down to the next level to try to identify what happened at Oak Ridge, ORNL and what happened at Hanford or what happened at Savannah River to that level.

DR. MELIUS: Yeah, but you really have no information on the unmonitored workers.

MR. CHEW: Well, I think that's an assumption.

DR. MELIUS: Yeah, I mean --

MR. CHEW: Yeah.

DR. MELIUS: -- what's the assumption? Tell me the assumption 'cause that's...

DR. ULSH: To answer your question about whether or not we observed any difference between the unmonitored CTW and the monitored CTW, I don't know that we've looked at that quantitatively to determine whether there were more pipe fitters in the unmonitored and more painters in the monitored. However, to the extent that one can accept the assumption that monitored workers were selected based on their exposure potential, that would also apply to CTWs. I know that that is a -- that is a point

of some contention, but --

DR. MELIUS: Yeah, but have you done anything to verify that assumption? I mean that's the... Seems to me that you'd be able to look at job histories and so forth and type of work that people did and if people were doing, you know, landscaping outside the facility, that would be -- I'd say less potential for exposures, maybe not requiring monitoring, as opposed to someone doing a high-exposure job in the facility.

MR. CHEW: Sure. I think the -- one of the data we pulled for the construction trade workers were the one who were monitored. Okay? And these were the one that had -- wore the badge with -- and so, you know, we -- and that basically applies that certainly the programs would say these are the construction workers that needed to be monitored and therefore they were monitored. That's where the data was pulled from. We would probably again, you know, skew it to the high side if you look at the general construction worker. The person who's doing, you know, landscaping would be -- may not necessarily have been monitored.

DR. MELIUS: Right, and I'm just trying to get the sense of did you actually look at that 'cause --

MR. CHEW: Yeah.

DR. MELIUS: -- where you have such a large number of people that weren't monitored, which is I think true for the construction workers, we're trying to get a sense of how representative this is, you know, sample that you've drawn from -- from the monitoring data. It doesn't include a lot of sites, it -- you know, limited number of sites 'cause it's what was readily available, and I think there are questions on, you know, all sides from the question of is -- is applying a single adjustment factor the appropriate approach. And -- and you know, I think you need to go a little bit, you know, deeper into your justification for that. Should there be an adjustment factor based on the site, should there be -- by the type of work. And this is supposed to be individual dose reconstructions. It's not supposed to be, you know, a single value fits everybody. And I think we're trying to -- trying to get at how much work you've

done to try to really validate this approach.

MR. CHEW: I understand your point. Thank you.

DR. ZIEMER: Okay. Brad, you have a comment?

MR. CLAWSON: Yeah, this is going to be an easy one. I just wanted to get back to the coworker model that you were talking about on that a little earlier 'cause I'm not quite clear on that. Say we've got a group of say operators that you -- you only have doses for half of them and the other half you have nothing for. You're going to take that half and you're going to take the 95 percentile of that, or -- I -- I guess that's where I got misunderstood.

DR. ULSH: No, what we're going to do is take the entire monitored population and look at the 95th percentile -- in general the 95th percentile -- and apply that to the unmonitored worker. So we don't do it by specific job title -- like for instance the process operators or for, you know, fuel handlers or brushers or anything like that. Does that answer your question?

MR. CLAWSON: Yeah, I was just wondering because I thought that you mentioned with the same job category, that you were -- you were

going to use the same job category and take the 95 percentile of that because --

DR. ULSH: In general we're going to look at the entire monitored population, not just -- not by job title.

MR. CLAWSON: Not just one group, because --

DR. ULSH: Not just one group, right.

MR. CLAWSON: 'Cause I can tell you in my group right now we've got people that are maxed and people that are zero, and that was just kind of an issue.

Another question I had was with the construction workers, are they falling into this 250-day period, too?

DR. ULSH: Are you talking about in terms of eligibility for SEC?

MR. CLAWSON: Right.

DR. ULSH: Sure -- yes, they would also --

MR. CLAWSON: Even -- even if they -- 250 days total throughout the sites?

MR. ELLIOTT: No, no, no, no, no, this is -- this is dose reconstruction. You're talking SEC. We're not talking SEC. Okay?

MR. CLAWSON: Okay.

MR. ELLIOTT: If a construction trades worker

fits into one of the SEC classes, they have to meet that class definition. If the class definition requires 250 days for health endangerment, they would have to meet that. But this construction TIB doesn't deal with the SEC issue.

MR. CLAWSON: Doesn't deal with the SECs, okay.

DR. ZIEMER: Dr. Lockey, you had an additional comment or question?

DR. LOCKEY: Yeah. What would be helpful to understand that one particular graph is the denominator across the years. How many -- how many annual dose reconstruction for construction workers were done per year based on how many were available, or how many actually worked? So we can see how you -- how this data -- what -- what -- how's -- what are the -- the data that this graph is based on. I can't tell from this. I can't tell if -- if the majority of the doses that were used are in the later years or in the earlier years. What percentage -- how would you divide this out percentage-wise?

DR. ULSH: Okay, let me -- let me make sure that I understand your question. So what

you're asking is for a particular year, say 1970, how many actual CTW histories did we look at in that year, and the same question for all monitored workers in that year. Is that --

DR. LOCKEY: Based on how many CTW workers there were. I mean --

DR. ULSH: Ah, I see, okay. So --

DR. LOCKEY: -- a denominator.

DR. ULSH: Yeah, I understand what you're saying.

DR. LOCKEY: So I can know -- I know how robust your data is to generate this -- this graph. I can't tell from this -- this graph how robust your data is.

DR. ULSH: So in other words, what percentage of the CTW population was actually monitored, and the same for all monitored workers, is that --

DR. LOCKEY: Correct.

DR. ULSH: -- sort of what you're asking?

DR. LOCKEY: Correct.

DR. ZIEMER: The numbers at the top are sort of the integrated values for the whole curve. Is that correct? That is, the 216,000 histories, that's the integral of those individual points,

I guess.

MR. CHEW: There is now being worked a -- what I consider an appendix to this part-- to the OTIB-52 to give the supporting information that generated all the graphs that you have seen here from the OTIB, including this particular one here. And at that time those particular back-up information will give the number of CTW that were monitored and the number that receive exposures and also the number of AMWs for any -- for each year. Okay? It will be backup information here.

DR. LOCKEY: Does it give you the denominator, too?

MR. CHEW: I'm sorry, say it --

DR. LOCKEY: How many construction workers were on site versus how many were monitored in any one particular year.

MR. CHEW: Yes, it will give the number of construction workers that were there identified and the number who were monitored.

DR. LOCKEY: Okay.

MR. CHEW: Yes, it will do that. All right? And it'll be for each particular site.

MR. ELLIOTT: If you go through the OTIB-52,

which I have right here, you will see by site tables that list the observed ratios -- in other words, the all monitored versus the construction trade workers who were monitored, the number that were monitored and number with measurable dose. That doesn't give you all that you're asking for, and that's the addendum that I think Mel's talking about that we will add to this. But if you have a chance to look at this TIB-52, I think you'll get a better explanation. Unfortunately, I think this slide has presented more confusion than it has clarity, so I'd encourage you all to look at this TIB.

DR. ZIEMER: OTIB-52 is now on the web site, by the way. It went on within the last couple of weeks. The date on that TIB is August 31st, so it is on there so Board members, it probably would be worthwhile going through that TIB and see if there are further questions.

Also I would mention to you in connection with this, and we will have further opportunity to discuss these issues, but we still have to consider -- as a carryover from our August 8th meeting -- the response to a letter that came

to us -- I'm looking for my copy, but anyway, it's a letter from -- from Pete --

DR. WADE: Stafford.

DR. ZIEMER: -- Stafford with a number of issues raised relative to construction workers and also relates to some comments we received from Knut Ringen I believe last time or our last meeting and perhaps trying to deal effectively with this issue of -- of the unmonitored construction workers. So this is kind of a first step is this TIB, and I think -- to the extent that it can be refined or improved -- that would be good then.

DR. WADE: If I might, just sort of from a procedural point of view, to offer a potential path forward for the kinds of questions raised by Drs. Lockey and Melius, SC&A -- we will be considering asking them to review additional procedures. And I don't think, John, that TIB-52 is on the list. I think it should be added to the list, but I think later in this meeting we'll have an opportunity to discuss whether or not the Board wants to form a working group to look at this or have SC&A review it, or both. But I think certainly we want to see OTIB-52 as

a consideration for something to be reviewed by the Board's contractor.

DR. ZIEMER: Thank you. Let's see, additional comments, Dr. Melius or -- thank you. Dr. Lockey, you have any follow-up? Brad, any follow-up?

Thank you very much.

DR. WADE: While they're walking away, another sort of procedural issue for later on the agenda, the ingestion and the oro-nasal breathing. These are issues that have come up through site profile reviews, and I think the Board needs to decide how it wants to track progress on these issues when they sort of leave the orbit of a particular working group and are out there. So that's an agenda item on Thursday where the Board is going to decide how it wants to track cross-cutting issues, and this would be a good example of what those cross-cutting issues are.

SC&A FUNDING AND ACTIVITIES FOR NEXT YEAR

DR. ZIEMER: Our next item is a -- deals with funding for the Board's contractor, SC&A, and the upcoming activities for this -- this coming year. And let's see, Lew and -- are you going

to kick this off?

DR. WADE: I'll just make very brief --

DR. ZIEMER: And David Staudt is here, who's our contracting person.

DR. WADE: Right, David Staudt is the contracting officer on the SC&A contract. He's really the person with the wallet and the person with the authority, and I asked David to come and brief you on two issues. But first he'll give you an update on where we stand in terms of the funding for SC&A next year. That'll be dollars and tasks.

What David will also remind us of is that we need to be assigning SC&A specific work, such as specific procedures to review or such as specific site profiles to review. And once David's finished, I can set the stage for you as to how we might go about making those decisions, give you information, and I think we have that later on our agenda on Wednesday and Thursday in Board working time to talk about that more specifically. But I thought it'd be well to start with David going through where we stand on the SC&A contract based upon the instructions they were given by the Board.

And then David's second contribution is going to be to look at the conflict of interest issues that have arisen relative to SC&A and to report how those issues have been resolved. David.

MR. STAUDT: Good afternoon. Just as a follow-up to the meeting in August, I just want to let you know that all the task order modifications are in place so that the -- that the SC&A is fully authorized to proceed as needed. And just to quickly go over these, Task Order I, I authorized for six site profile reviews for next year.

DR. WADE: David, maybe if I could just point people to -- there's a tab in their book, SC&A, and if you flip through that tab you will find this sheet that David is speaking to that speaks to the individual tasks and the funding, so -- sorry, David.

MR. STAUDT: That's okay. Yeah, there's five active tasks, and continuing Task I there are six new -- profile reviews, five are new ones and also we had the Savannah River profile is revised. Also included in this task is the continuation of the closeout process for

existing site profiles.
Task Order II is complete, so we'll move on to Task Order III. SC&A is going to review up to 30 new procedures and review the generic workbooks and also we assume that you will -- the Board's going to follow the six-step process in moving towards the finalization of this task.
Task Order IV, SC&A will assume another full round of dose reconstruction reviews will be done next year, and this is going to include 60 dose reconstruction reviews. And I think as you remember during our August 8th discussion, we spent quite a bit of time, and we finished with a revised Option 2B, and these had to do with more discretionary audits were being proposed.
Task Order V relates to the SEC work, and five SEC reviews will be completed with Technical Basis Documents and one without, and we assume that SC&A is going to attend four full Board meetings and four subcommittee meetings.
And Task Order VI is simply related to SC&A's program management cost.
One of the things I just want to let you know,

this is good until October 1st, 2007, so SC&A's ready to go. And to follow along with what Dr. Wade spoke about, I think it would be very beneficial to have John Mauro just quickly go down each one of these tasks and let you know where in the pipeline that -- that they need approval. And he did speak very briefly this morning related to Task Order IV, but I think clearly he -- they are waiting for some direction and it's holding them up.

So I don't know, Lew, if you want to think about addressing that now or --

DR. WADE: I'd like to set the stage on that. Let's -- let's turn our attention to Task Order 1. You have at your place a list of all of the site profiles that NIOSH has done -- that's this piece of paper. John Mauro has also forwarded to you a list of all of the reviews that SC&A has done or has underway. I think the task for the Board is to decide what additional five site profiles you would like SC&A to begin to look at. And again, that's a discussion we can have Wednesday or Thursday. What I would like to have just a brief discussion on now is what information would you

like staff to prepare for you when -- to have before you when you undertake the discussion of the additional five site profiles. You remember we've asked SC&A to do six. One is a revisit of Savannah River, and five additional. In anticipation of this discussion I asked NIOSH to list the total number of cases that are currently in the system related to the site profiles. And if you would like additional information to that, then we can certainly prepare that leading up to your discussions on Thursday.

If you have that piece of paper in front of you, I could just very quickly identify for you the site profiles that SC&A has reviewed or is in the process of reviewing. Starting at the top of that list, Bethlehem Steel, the Savannah River Site, Mallinckrodt Chemical Company, the Hanford site, INEEL, Nevada Test Site, LANL, Rocky Flats, X-10, Y-12, Mound, Fernald, Paducah, Linde Ceramic, the Pinellas Plant and Iowa Ordnance Plant at the very bottom. Of the universe of site profiles, those are the site profiles that have been or are under review. Obviously what's left is the candidate

population for you to consider to select the next five. And I think what David is telling us in his gentlemanly but strong terms is that we really need to leave this meeting giving SC&A work to do under this task.

Any additional comments on one, or any additional information the Board might like? Mark.

MR. GRIFFON: I'm just curious -- maybe I missed this -- how is this list formulated, Lew? Is this...

DR. WADE: This is a list of all the site profiles --

MR. GRIFFON: All the site --

DR. WADE: -- on the web site.

MR. GRIFFON: All the site profiles on the web site, okay.

DR. WADE: Right, and then the ones I mentioned to you are the ones that have already been or are under review, so you could assume what's left are candidates for you to -- to ask SC&A to review on your behalf. And -- and --

MR. GRIFFON: I think at least one bit of information that might be helpful, I think I could pick off a couple of them, but it might

be useful to know which ones have qualified SEC petitions --

DR. WADE: Okay.

MR. GRIFFON: -- how many of these sites that are -- the site profiles that aren't reviewed have qualified SEC petitions. That might be good to know.

DR. WADE: That's something we will give you by tomorrow.

DR. ZIEMER: Yeah.

DR. WADE: And I just want -- this -- purpose of this is just to make sure the Board has what it wants to do its deliberations. Anything else? Anything, John, that you would like to add?

DR. MAURO: Just to point out that we are -- we have the capacity to handle the new work as soon as it's authorized. We talked about that a little it this morning, so whenever you're ready to direct us to do some additional work on this, we can begin immediately.

DR. WADE: Okay. So the task at hand is five additional site profiles for the Board to identify by the end of the meeting for SC&A to work on.

DR. ZIEMER: Let me also if I -- would it be of value to know -- these are the total cases that have been submitted to NIOSH?

DR. WADE: Correct.

DR. ZIEMER: Would it be of -- would the Board be interested in knowing how many of those total cases have actually been already processed as far as dose reconstruction?

DR. WADE: Okay, so --

DR. ZIEMER: Seems to me --

DR. WADE: -- cases done.

DR. ZIEMER: Cases -- dose reconstructions completed.

DR. WADE: Okay. So we're going to add two columns, qualified SEC petition and cases completed.

DR. ZIEMER: Any other information? Mark.

MR. GRIFFON: I'm just thinking, can -- I think this is a pretty easy request, a separate listing maybe of the qualified SEC petition sites. And the reason I -- I guess the reason I'm asking that is I -- I note a few SECs that are out there, qualified SEC petitions -- like for Harshaw and Monsanto. I don't -- the site profiles don't exist, but I think they might be

in the hopper. I think NIOSH may be working on site profiles for those sites, so just a listing maybe of the SEC -- qualified SEC petitions.

DR. WADE: I do think Larry gave us that today, but --

MR. GRIFFON: Oh, he did?

DR. WADE: I believe he did, if my memory serves me --

DR. ZIEMER: I think Larry gave us that. What about site profiles that are in process or fairly advanced but not necessarily out yet, is that a list that's readily available?

DR. WADE: Well, if it -- I will give you the best that we can. So it's in-progress site profiles and we'll repeat the list of qualified SEC petitions.

DR. ZIEMER: Other information? Other information? Wanda.

MS. MUNN: This existing list, though, certainly appears to cover all the major sites, which really would seem to me to be our primary focus.

DR. WADE: Well, certainly -- again, given David's instruction -- we want to make sure

that SC&A leaves with work and not waiting for site profiles to be completed. But I could see how that information would allow the Board to consider possibly giving them three or four now and holding while a couple of other things are done. So I think it's valuable information. If we can get it, we'll get it.

DR. ZIEMER: Okay. Thank you.

DR. WADE: Moving on to Task Order III, this is the review of procedures. Now again, under your tab in your book that says "procedures review", you have John Mauro's work product that looks at the procedures that have yet to be reviewed, with a -- with a significant addition of TIB-52. This is what you have to consider instructing your contractor on the next 30 procedures. Is there anything else you would like to inform that discussion before you have it in earnest on Wednesday or Thursday?

DR. ZIEMER: Well, are there other TIBs -- I'm trying to recall on the web site 'cause I checked it recently. Is there another TIB that's -- that came out in July or August that wasn't on the list? Anybody remember?

MS. MUNN: I thought that was 52.

DR. WADE: We'll double-check that. We'll have somebody in the room at the time who knows that.

Okay, then we have Task Order IV. Here we have a little bit of leeway. We -- we have decided that at our December meeting --

DR. ZIEMER: Not -- apparently not everybody has that list of (unintelligible).

DR. WADE: It's under your -- in your workbook under procedures review, way in the front. That's where it used to be, anyway.

MS. MUNN: Yeah, that's where it is.

DR. ZIEMER: That's the original list. Yeah, we got (unintelligible).

DR. WADE: We got things out of places just to test -- we're constantly testing the intelligence of the Board.

MS. MUNN: And I'm consistently flunking.

DR. ZIEMER: Okay, here we go.

DR. WADE: Task Order IV -- John's going to tell us something important.

DR. ZIEMER: Okay, John.

DR. MAURO: I just have a -- an observation that in going through the list of procedures that were originally prepared on June 9th,

please keep in mind that many of these procedures we have reviewed as part of the Y-12 activities --

MS. MUNN: Yeah.

DR. MAURO: -- as part of the current activities related to Rocky Flats, so there's another dimension to this.

MS. MUNN: Yes.

DR. MAURO: We certainly, if so requested, we could prepare a report on the ones we've all been very actively involved in reviewing as part of the -- the issues that are before us right now that -- that -- and so what I'm getting at is that the -- those procedures that we've already been very much engaged in, we -- if you're -- if you so require, we could very readily and quickly prepare a report regarding that procedure.

DR. ZIEMER: In fact that would be helpful to have the list of which of these procedures in essence have been reviewed anyway.

DR. MAURO: And I'll -- I will get together with the rest of the SC&A team and we'll get back to you about it.

DR. WADE: So you'll be aiming to have that to

us tomorrow or the next day, John?

DR. MAURO: That sounds perfectly doable.

DR. WADE: Good.

DR. ZIEMER: You're a good man.

MS. MUNN: Yeah.

DR. WADE: Task Order IV, this is where we have some -- a little bit of breathing room. John has told us that they are working at capacity on Task IV. What he would like from us no later than the December face-to-face meeting, the definition of at least the subset seven, the cadre seven of dose reconstructions to be reviewed, so that's on our list.

And then Task Order V is the SEC task. That's something that happens more in real time, and I -- and I want you to know that there's capacity in the contract. For example, now the Board's going to be reviewing four SEC petitions at this meeting. As an example, you'll have an SEC petition that relates to Chapman Valve. I'm sure there'll be discussion and debate. The contractor stands ready to -- to address issues as you assign them. I don't know if we want to use that capacity without watching these cases come to us so that there is

capacity to deal with the cases as necessary. I think that's one where we really have to let the world come to us. But I do think there are things that will come to us at this meeting and at subsequent meetings that we can assign to the subcontractor.

DR. MAURO: I'd also like to point out that under the current what I call the fiscal year Task V, we have adequate budget and capacity not only to receive additional direction from the Board to do additional SEC work under the existing -- last year's -- scope of work and budget, now we also have the additional I believe five or six. So what I'm getting at is we have the resources to take on more than just the new set that might emerge, but we also have capacity to absorb some additional -- maybe three, I think as many as three -- from the existing budget 'cause we -- we're -- we're -- so we could prepa-- we're in a position to accept more than just the fiscal year 2007.

DR. ZIEMER: Okay.

DR. WADE: So again, be ready to assign your contractor work under Task V as it becomes appropriate.

If I might combine two issues, the oro-nasal breathing discussion -- I'm informed that there's a heavy breather on the telephone line, so I'll ask everyone to sort of mute their -- their phone if at all possible. Background noise can be terribly confusing and distracting to people, so not pointing the heavy breather out, please, mute your phone if at all possible.

DR. ZIEMER: Speaking of the phones, though, we haven't really given Mike an opportunity to comment on this last topic. Mike, did you -- did you have any comments? Are you still there and are you breathing heavily?

(No response)

Have we lost Mike?

DR. WADE: I don't hear him.

DR. ZIEMER: You hear --

DR. WADE: No identification.

DR. ZIEMER: Okay. Mike, if you hear us and have comments, let us know.

DR. WADE: So that completes my -- this issue for me. I mean we will take it up in Board working time. I think we'll be -- you'll be better informed if we can give you the material

you've requested --

DR. ZIEMER: Right, right.

DR. WADE: -- and we'll leave meeting Dave -- David's challenge of tasking his contractor.

DR. ZIEMER: Okay, then we can move on to the conflict of interest?

SC&A CONFLICT OF INTEREST RESOLUTION PLAN

MR. STAUDT: Yes, and I think -- yes, we can move on pretty quickly. The final topic is related to SC&A's conflict of interest, and this was entitled the resolution plan. Basically what happened, in -- July 24th I sent an e-mail to the Board which basically said that SC&A had established a conflict of interest firewall, so I just want to quickly go over that if you have any questions related to it. But the background is that SC&A has a conflict of interest plan that was approved by you and is part of their contract. It basically said they could perform free of any conflict of interest and the plan itself describes the methods employed by SC&A to detect, avoid and mitigate any potential conflict of interest.

One interesting note is under Section 3 of the

plan -- and I'm not going to read it to you, but basically it -- it states where SC&A is not allowed to bid on certain work, primarily related to DOE and other work related to ORAU. But the interesting thing of that paragraph is it does not mention any work related to the Department of Defense.

In late -- in late May I was contacted by Dr. Wade that basically he had some concerns with work that SC&A was performing, and I did send a letter to SC&A that we -- we had some concerns related to work under two subcontracts with the Defense Threat Reduction Agency, and that had to do with dose reconstruction for military personnel at the Nevada Test Site and the Pacific Proving Ground. As always, HHS is an -- and part of that is obligated to protecting integrity of this program, so in doing so I'm guided by Federal Acquisition Regulations Section 9.5, which addresses organizational and consultant conflicts of interest.

Specifically, 9.504 requires that I, as the contracting officer, exercise common sense, good judgment and sound discretion on whether significant potential conflict exists; and if

it does, the development of an appropriate -- rules of resolving it.

There was quite a bit of domino back and forth between NIOSH and SC&A on this topic, and on June 29th SC&A replied to -- to myself with some mitigation strategies. And after careful consideration, we chose the firewall strategy. Basically that requires that SC&A provide non-disclosure agreements for the work and computer fire-- password protections, and I get to audit the NIOSH DTRA invoices to find out who's working on what. And I wanted to let the Board know that this -- this -- this plan, this strategy is not stagnant, the one that SC&A has in place, depending on the work that they're doing. And my main goal is to minimize any perceived or real conflicts of interest.

So I just wanted to let you know that the firewall strategy was approved and that SC&A has been very quick with fully implementing the strategy. And I'm really relying upon the Board or anybody else in the general public that -- on any feedback related to conflict of interest so we can mitigate those.

And the other thing I just want to just hit is

that the firewall has a lot of benefits to the Board. It allows you to still utilize SC&A to the maximum that you can, and it ultimately best serves the claimants and the taxpayers themselves. So this is just to -- basically segments -- or augments their original conflict of interest plan. It did not cover DoD activities. So if anybody had any questions on -- on that.

DR. ZIEMER: David, do we need to formally modify anything or ask them to modify their plan in a formal way to take this into consideration for the future?

MR. STAUDT: That certainly could be done. Or we could, if you want to, incorporate and reference the firewall plan that was accepted, if you -- if you would like me to do it, I can do it.

DR. ZIEMER: Okay.

MR. STAUDT: And then basically the only thing it would require is I could simply modify the base contract and that could be made a part of it, if you like. And that way they're contractually obligated to do that.

DR. ZIEMER: I'm not sure the best way to

proceed, but it seems to me that it would make sense to somehow formalize in the conflict of interest plan -- does that appear on the web site now?

MR. STAUDT: Yes, it is. Their full plan is on the web site.

DR. ZIEMER: So that it covers this aspect as well -- in a general way. That is, DoD or other agencies where a firewall is needed.

MR. STAUDT: And I'm -- in my capacity I'm certainly interested -- and SC&A's a small business -- to make sure that we're not doing anything that would mitigate any opportunities to -- to bid on work and do other -- you know, to grow their business. But we have to protect this program, too, so that's -- that's -- it's that balance that we have to be careful --

DR. ZIEMER: Are we trying to keep them small? Is that --

Okay, so any action required I guess at this point?

MR. STAUDT: No, none is required. But I would --

DR. ZIEMER: What can you do to -- to sort of institutionalize this or make sure it's

covered?

DR. WADE: Yeah, I think -- given the fact that the Board did an excellent job in the original policy that still exists, I would like to see the Board, either itself or instruct David to bring back a draft of a modified policy that would include the benefits of what we've learned here. So I think it is important that the SC&A policy be modified based upon this, and the Board can either do it itself, it can ask David and I to do it as a draft. We leave that to you, but I think it would be good to complete the record by doing that.

DR. ZIEMER: Yeah, I'd like to suggest, if there's no objection from the Board, that we ask David to take the lead in this. He knows what kind of words are needed to put in -- is there any objection --

MS. MUNN: No.

DR. ZIEMER: -- if we ask David to prepare for us a document that we can adopt as an addendum to the SC&A COI policy? Any objections? Without objection, I will so instruct you and appreciate at -- at your earliest convenience, perhaps by the time of our next meeting.

MR. STAUDT: Certainly by then. Thank you.
DR. ZIEMER: And Lew will work with you then making sure that --
DR. WADE: In spite of his young age, I work for him so I'll do what he tells me to do. I know there's also been some Board concerns raised about the Board keeping up with this and information, and is there anything the Board would like to see -- David talked about reviewing the materials he reviews. Is there anything periodically the Board would like to see on this or how would you like to handle -- us to handle the information that David reviews in terms of -- he reviews the different billing records for the two contracts and what would you like -- what would you like --
DR. ZIEMER: Now we do -- I think all of us now are getting the monthly progress reports which include the costing and so on.
DR. WADE: But not on the DTRA contracts.
MS. MUNN: No.
DR. ZIEMER: Oh, on the DTRA, no --
DR. WADE: Well, if you wanted -- David's doing a comparison.
MR. STAUDT: I can take care of it for the

Board. I'm not sure that, you know, you -- you want to even get into that.

DR. ZIEMER: I'm not sure we want the DTRA information. I don't.

DR. WADE: Okay, so we'll ask David to do that.

MR. STAUDT: I'd be happy to.

MR. PRESLEY: (Off microphone) (Unintelligible) would be of -- I don't think it would (unintelligible) benefit.

DR. ZIEMER: Thank you. Any questions or comments for -- for David Staudt on this issue?

(No responses)

Thank you very much.

MR. STAUDT: Thank you all.

DR. WADE: Thank you, David.

DR. ZIEMER: Do you have anything before we recess?

MR. PRESLEY: Let me ask David a question (unintelligible) one time. Will our next meeting in December be too late, or do you need this done before then, Board action?

DR. ZIEMER: Well, it's already in effect.

MR. STAUDT: Yeah, it's in effect.

DR. ZIEMER: I was simply saying we want to --

MR. PRESLEY: Oh, okay.

DR. ZIEMER: It's in effect sort of on an ad hoc basis.

MR. PRESLEY: Okay.

DR. ZIEMER: I think we want to formalize it so it's on the web site and part of the policy.

DR. WADE: Well, maybe for our October call. This is something we could easily do on a conference call.

DR. ZIEMER: Thank you. We're going to have a public comment session beginning at 5:00. We have time for about a 15-minute break. We want to start promptly at 5:00 o'clock, so please keep note of the time and we'll see you back here. If you are planning -- or wish to comment and haven't already signed up, please do so. Thank you very much.

(Whereupon, a recess was taken from 4:40 p.m. to 5:00 p.m.)

PUBLIC COMMENT

DR. ZIEMER: We are ready to begin our public comment session. I first would like to determine whether or not Terrie Barrie is with us by telephone. Terrie, are you on the phone?

MS. BARRIE: Yes, Dr. Ziemer, I am.

DR. ZIEMER: Thank you. And is Kay Barker

present on the phone?

MS. BARKER: Yes, Dr. Ziemer, I am.

DR. ZIEMER: Thank you very much. Both Terrie Barrie and Kay Barker requested earlier in the week to address the assembly by telephone. They're representing the Rocky Flats site, actually, and let's -- we're going to begin with Terrie Barrie, if we can turn the volume up on her phone. Terrie, if you would, please proceed.

MS. BARRIE: Thank you, Dr. Ziemer, and good evening -- and members of the Board. For the record, my name is Terrie Barrie. I'm with the Alliance of Nuclear Worker Advocacy Group. I would like to thank you, Dr. Ziemer, Dr. Wade and Mr. Elliott for arranging this call to present my public comments tonight.

Dr. Ziemer, I'm still confused. I was so excited when, at the last working group meeting, Board member Mark Griffon and SC&A team member Kathy DeMers stated they found several entries in one log book confirming that badges were destroyed because they received too high a dose of radiation. Kathy also had previously uncovered a memo which directed the

health physics personnel to enter a zero in the dosimetry record if the film badge was blackened. Perhaps I'm naive, but I thought these findings were all (unintelligible) was to prove the assertions in the petition that records were destroyed and falsified. The petition form itself certainly implies this (unintelligible) proof of record manipulation and destruction. Is NIOSH still certain they can reconstruct dose when the data is suspect? Doesn't this amount to guesswork?

At the April meeting in Denver three explanations were given by NIOSH to explain blackened badges. One reason was that they were overexposed by light, another was that the badges were contaminated with body oils, the third reason was that they were exposed to too much radiation. My logic dictates that if NIOSH truly intends this program to be claimant-friendly, they would use the assumption that blackened badges were overexposed due to radiation, and not to light or body oils.

One issue bothered me during the last working group meeting. There was a discussion on

whether the production stopped after the 1969 fire or if (unintelligible) makeshift facility and that continued production during the cleanup of Building 776 and 777. It was decided that there was no makeshift facility. I confirmed this with a former worker, as well as the book "Making a Real Killing" -- great book if you want to know the history of Rocky Flats.

I am under the impression that because there was no production after the fire, NIOSH assumes this explains the zero readings. No production, no exposure. Yet -- again according to the book "Making a Real Killing" -- AEC investigators estimated that less than ten percent of the 7,641 pounds of plutonium in Buildings 776 and 777 was damaged or burned to oxides, and that 99 percent of the Pu had been retrieved. That still leaves 76 pounds of plutonium unaccounted for. Wouldn't it be expected that the workers would have been exposed to the radiation during the cleanup and not just production? I personally question any document that shows a zero or lower radiation level for 1969.

(Unintelligible) at the last working group meeting about how much time was being spent on the Rocky Flats petition, and I agree. It must be noted, though, that it took NIOSH four months to qualify the petition and another ten months to submit the evaluation report to the Board after the qualification. They neglected to do a full search of documents that could substantiate the testimony of the workers (unintelligible) this past summer, a full year after they qualified the petition. Yet again it must be noted that NIOSH had years to provide the site profiles. One would have hoped that a comprehensive and thorough search of the Rocky Flats records would have been their first priority before issuing any technical documents.

As I said, I agree that a lot of time has been expended on this petition. I do not agree with Ms. Munn's opinion that NIOSH can reconstruct dose with reasonable accuracy. We have conflicts of interest with the site profile. We have proof that badges were destroyed. We have proof that the NDRP is inaccurate in at least one instance. We have proof by the March

30th, 1978 AEC memo of 20 safety issues, including -- and I quote -- unnecessary radiation exposure to two operators, end quote. Dr. Ziemer, I'm not a scientist, but I don't see how dose can be reconstructed with any sense of accuracy using flawed data. It appears to me that it is more theoretical than sound science. I know there's an interest by some Board members to vote on this petition at this meeting, but many issues are not resolved and I feel they need to be before a full vote is taken. Moreover, I strongly feel that any vote on this petition should be made in Denver so the Rocky Flats workers who are affected by this decision can be present.

Lastly, I understand that Part E of the program was discussed this afternoon. I'm sorry that I could not listen in at that time, but I do appreciate that this part was raised. (Unintelligible) aware of many problems with the implementation of Part E and they need to be remedied. It is most definitely not claimant friendly. I am happy that the Board issued an invitation to DOL to provide further explanations to the Board about this

implementation.
Again, I thank you for your time.
DR. ZIEMER: Thank you very much, Terrie. Hang on, we'll make sure that Terrie can hear my comments. Thank you, Terrie, and I do want to alert you to the fact that we do have a session tomorrow morning at 10:30 on the Rocky Flats SEC. Hopefully you'll be able to join us by phone at that time and -- and Mark and other members of the working group will be reporting on some of these issues tomorrow to the Board, so --
MS. BARRIE: Yes, I do plan on -- on listening in on that (unintelligible).
DR. ZIEMER: Very good. Thank you for your comments.
We also then want to hear from Kay Barker, and Kay is a claimant from Rocky Flats. Kay, if you will proceed.
MS. BARKER: Thank you, Dr. Ziemer. Good evening, Dr. Ziemer and members of the Board. My name is Kay Barker, and I want to thank you for allowing me to phone in my public comments tonight on the Rocky Flats petition. Transparency, I truly appreciate the Board's

insistence that this is being maintained. It is because of this transparency that I was able to locate some very disturbing facts related to NIOSH and the petition. A great emphasis has been placed by NIOSH on the neutron dose reconstruction project as a reason that they claim they can reconstruct dose.

You may remember that I pointed out that the NDRP was flawed in my husband's claim. I received a copy of the NDRP. I found that Roger Falk was listed as the author. You all know that there is a real problem with the claimants about his participation in the site profile and the petition review.

Getting back to the transparency, NIOSH has a link on their web site for ORAU disclosure statements. I decided to check out the other five authors of the NDRP. Sure enough, two other people -- Jack Aldrich and Nancy Daugherty -- listed Rocky Flats as their previous employer. I knew Nancy back in the day, and ran into her at the April Board meeting. Joe Aldrich states that he has a conflict of interest with Rocky Flats. I would like to point out to you, the Board, and for

the record that Nancy Daugherty did not state that she has a conflict of interest with Rocky Flats, yet she worked there as a health physicist for 12 years.

I then decided to check out Karin Jessen, author of the SEC evaluation report. Guess what? She lists that she has a conflict with Rocky Flats, too. The author of the document that says NIOSH can reconstruct dose has a conflict of interest with Rocky Flats? Conflicts of interest abound in the Rocky Flats petition, and nothing seems to be done about it. It amazes me that these documents are considered valid. If SC&A submitted documents with similar conflicts, would they be accepted? For some reason I think not.

Dr. Ziemer, I urge you and the other Board members to seriously consider this problem before deciding on the petition. I feel that these conflicts alone cast doubt on NIOSH's ability to reconstruct dose in a sound, scientific manner that the claimants would accept as reasonable. And I agree with Terrie Barrie, the Rocky Flats claimants deserve the Board -- excuse me, deserve the vote to be held

in Denver, Colorado.
Again, thank you for letting me make this call possible.
DR. ZIEMER: Okay, thank you very much, Kay, for those comments. Again, the working group on Rocky Flats is here with us and have heard your comments, and we will be discussing this topic tomorrow. Again, I hope that you will be able to participate by phone as well.
MS. BARKER: Yes, Dr. Ziemer, I plan on it.
DR. ZIEMER: Thank you very much. Now we will proceed with comments from people who are here present with us. I have six additional people, so I'd simply request that you be cognizant that others wish to speak and adjust your times accordingly.
I'll begin with John Funk, who's listed as representing the Atomic Veterans and Victims of Nevada. And John, we're pleased to have you here. I think, John, we've already received -- I think the Board members have already received your comments by e-mail. We'd be pleased to hear from you at this time.
MR. FUNK: Thank you. My name is John R. Funk. I worked at Nevada Test Site and other

(unintelligible) locations off -- off and on for over seven years, starting in 1978 and ending in 1994. I've had four bouts of cancer, of three are the 22 accepted types -- or one of the 22 accepted types, and I am presently still battling bone marrow cancer.

When Secretary Richardson and members of Congress told my fellow Energy workers and me how abused and harmed we had been, I admit that I was a little surprised. But I believed the promise of compensation to follow, and I filed at claim. At this date I have not been compensated, and neither has the vast majority of the persons who have filed claims. Even with my percentage of well over 50 percent, NIOSH found a way to still deny me by using a wrong formula of their IREP using 2,000 rems instead of 10,000, as is the standard of their own formula.

Either the government lied to us when they told us how abused and harmed we had been, or the government is lying to us now when they are denying our claims. In any event, we have been lied to and we're pretty angry. It seems we are nothing but pawns of the politicians,

maneuvering for advantage and attention.
My purpose, however, is not to discuss the personal situation of the hundreds of persons I represent, but I provide you with some input on (unintelligible) radiation compensation process and the Technical Basis Document from Nevada Test Site. I find this document to be highly flawed, and I can't help but wonder if its authors were ever on the site during the days when nuclear weapons testing was being tested.
As far as the overall compensation program is concerned, I think it's very unfair and flawed.
I would like to discuss the issue of fairness and the issue of the 250-day requirement.
The first issue of fairness is quite simple. Why was some sites grandfathered into legislation without regard to scientific evidence as to whether these sites were of maximum exposure? Or to me is why was workers on Amchitka Island written into the bill? We know that there was only three tests on Amchitka Island, none of which were above ground, and there was no significant problem with any of them. On the other hand, there were nearly 1,000 tests in Nevada, about 100

above ground, and there was several problems with many of the underground tests in Nevada. The only logic that seemed to prevail, that one of Alaska's senators was an appropriations committee -- was on the appropriations committee when this bill came through. Is it fair to penalize the thousands of workers in Nevada just because a Congressperson was not on the right committee at the right time?

The other general issue is the one concerning the 250-day requirement. I have asked repeatedly for someone to explain the logic behind this one. The only answer I get is it came from Congress. Now I know that Congresspersons make a lot of foolish mistakes, but there's no reasons for such foolishness to prevail. My personal opinion is that Congress was misled into believing that a long period of -- of chronic exposure was required for health impairment, just as it is for silicosis. You all know better than I that it can take less than a microsecond for health impairment from radiation to occur.

I have read some of the transcripts of past meetings that scientists from NIOSH believe no

criticality or episodic exposures occurred at Nevada Test Site. This is simply not true. Attachment 4 and 5 to the SC&A NTS report indicates clearly that doses were acute, if they occurred at all. Most of the acute exposures were associated with rapid re-entry to retrieve data from above-ground, vertical shaft or tunnel explosions. One particularly bad example was the Yuba test on June the 5th, 1963. This was a small, 3.1 kiloton test. Nevertheless, seven miners were exposed upon re-entry and nine of them had doses to the thyroid in excess of 30 rads. How could anyone say that no criticality ever occurred at the NTS? I remind you that the very purpose of nuclear weapons is to achieve instantaneous criticality.

There are also cases of so-called safety tests to achieve unplanned criticality, as mentioned in the NTS TBD, and we can safely assume that many low-yield tests were failures that resulted in partial criticality of unplanned criticalities. As Mr. Brady indicated in SC&A Attachment 5, the partial criticalities were worse than the complete criticalities because

the complete criticalities generally had their radioactivity in the molten rock.

Finally we combine the fairness -- issue of fairness and the 250-day requirement for the workers on Amchitka Island where there is no 250-day requirement in the legislation. Can anyone explain why those -- this is fair to Nevada workers?

I understand the Special Exposure Cohort has been established for persons who worked 250 days at the NTS from January of '51 through December of 1962. This is a great step forward and I thank the members of the Board for their support of this petition. However, the inclusion of the 250-day requirement for members of the SEC is still an unfair condition, and I trust the Board will continue to examine this issue.

In addition to this very important to remember that hundreds of tests that occurred at the NTS post-1962, and that many of these workers post-1962 received episodic exposures as well. And I've already mentioned the miners who inhaled (unintelligible) in 1963 which resulted in thyroid doses in excess of 30 rads. It did not

take 250 days for this to occur. The exposure occurred in one day.

There is two erroneous opinions that seem to exist concerning the NTS in the post-1962 era. One is that tunneling is similar to other mines and hazards can be compared to other mines. This is far from the truth.

Another erroneous assumption is that job classification for some -- or time cards can be taken as descriptions to represent the workers at risk. It is important to remember that the primary purpose of the Test Site in later years was to serve as a underground laboratory for the testing of nuclear weapons, which is like shaking hands with the Devil underground. Explosion at the NTS was sufficient to destroy every major city in the U.S., yet we are -- yet we rapidly re-entered the tunnels, drilled into the cavities resulting (unintelligible) explosions of vertical shafts. The tunnels were instrumental -- were instrumented with extremely sophisticated measurement systems to monitor the performance and effects of these tremendous explosions, and especially during the early days. It was necessary to re-enter

the sometimes highly contaminated area in order to retrieve instruments and detectors.
The construction of a tunnel laboratory and the building of the physical facilities to supply -- - supply sophisticated electrical wiring, the insulation of complex closures and sealed devices involved many crafts that far transcend miners alone.
Job classifications are not well-identified in the NTS TB-- TS-- TBD. There are some peculiar statements made on page 17, NTS TBD document on internal dose. These give a very limited list of job classifications for persons that might have been exposed to tritium, and further the only persons with Q level clearance could have been exposed to tritium.
As a carpenter/welder, neither job classification is mentioned on page 17, I was in the tunnels on many occasions before I had a Q clearance. And after I received my Q clearance I personally escorted many persons with red badges, non-Q, to work in the tunnels, right up to the day that we left and locked the door. Many of us carpenters who also welded were cutters and built many structures out of

wood, steel and concrete within the tunnel complexes. There were also many electricians and other job classifications not mentioned involved in bringing power to the sophisticated wiring equipment. In addition there were about nine other crafts also involved in underground laboratory work. In fact, the miners were less than eight percent of the -- of the workforce, yet there's -- they -- seems to be on the -- on the site profile they seem to be the only ones working. I guess the rest of us just were hiding out there somewhere in the bush.

Also time cards are not a reliable indica-- of where a person might have been working. Time cards indicate only where the source of the money used to pay the salaries. There were many reasons for a person to work in one location but to be paid from another location. For example, people waiting for security clearances for Area 51 were often -- would work in Area 3 and Area 2 for a couple of months till their clearances to go in 51 would come through. I know that place is not supposed to exist, but it does, but that -- there was other cases where that -- my tunnels would go broke

and sometimes they'd send -- my primary area was Area 3. I was sent up to Area 12 on loan many times and my pay came from Area 3, but I was up in 12.

Every person has a security badge (unintelligible) that he wore. Even a Q-cleared person may not have been allowed inside a tunnel unless they had a need to know. The badges also had a clear marking of what areas a person was permitted to enter. In terms of identifying persons at risk, there'd be many reasons to look at the records concerning allowable entry into different areas. It should be kept in mind, however, that a person could roam all over the Test Site, and only a few secured areas required a badge check. Many a so-called rad safety areas were only marked with a tape or a one-wire fence.

Employees' evaluation cards, a type of very informative record that should be available is the employee's evaluation card. These periodic evaluations not only told how well it -- we performed our assignments, but they also indicated the nature of our assigned task. A large fraction of workers were non-productive,

in the sense they never left Mercury for the forward areas. Rather they offered life support activities, and many of these persons were Q-cleared. I mean a dishwasher at Mercury might have been Q-cleared, so you can't go by the badge. Whether they had permission to enter the forward areas beyond Gate 200 should be in their security records.

I know this is not the Board's subject, but I'm going to bring it up anyway because it's part of it, chemicals. I also want to remind the members of the Advisory Board that a large number of chemicals were used at NTS. Beryllium was used in many applications. Mercuric chloride was used at -- to treat wood. Beryllium oxide, mercuric chloride were contained in fluorescent light tubes which were broken by the thousands. Acetone was used for cleaning as well as stabilizer in -- in acetylene fuel. Lithium was used for special purposes in the tunnel, and we were exposed to diesel exhaust, which did not pass through catalytic converters. Silica was also present in the tunnel. Perhaps the worst thing of all was the uncontrolled diesel exhaust, which I

understand contained benzene.
One challenge I would leave the members of this Board, explain to us -- I hope I pronounce this right -- the synergetic effect of these chemicals and radiation together.
Thank you for the opportunity to address you. I hope that you can influence the Congress to all -- this legislation to make it fair to all workers. The present favored treatment of workers on Amchitka makes no sense, and neither does the 250-day rule for NTS radiation workers. NTS TBD in my opinion contains some serious flaws. The idea a job classification alone can identify someone at risk is not true, and neither is the idea only Q-cleared persons could have been in the tunnels and exposed to tritium. I have made suggestions on how other records could be used to determine persons at risk, and I hope you will consider that and the systegenic (sic) effects of exposure to both radiation and chemicals. Thank you very much.
DR. ZIEMER: Thank you. Thank you very much, John, for those pointed comments.
Next we'll hear from Patty Cook -- Patty.
MS. COOK: Good evening, Dr. Ziemer and members

of the Board. My name is Patricia Cook and I am claimant 1,359 on behalf of my mother, Irene Cerboskas Halperson*, who passed away of multiple myeloma in June, 1997. She worked at the Test Site Nuclear Rocket Development Station at Jackass Flats from August 1963 through December 1970. In fact, her last day was the day being buried* ended.

She worked for the Pan American World Airways. Her office was housed in trailers next to the E-med and R-med buildings. She returned to work at the Nevada Test Site from 1980 to 1986 working for Atlas Wire Line.

My statement will relay my experience with NIOSH and the Department of Labor in regards to the Act. My claim was denied after five long, tedious years. My disagreements with the way dose reconstruction was administered fell upon deaf ears and total disregard.

The final adjudiation (sic) board granted me an oral hearing in January of this year. I was accompanied by a local newspaper, that was not allowed into the proceedings. Why? I thought there was freedom of the press. Explain to me where the government disallows the media to

participate. What did the Department of Labor have to hide? Maybe that the dose reconstruction was not a good example of scientific findings and based on minimal information.

(NOTE: Another conversation was present during this speaker's comments. Every effort was made to isolate the speaker from that secondary conversation.)

Explain to me why I had to take an oath at the hearing, and DOL did not. The burden of proof is my obligation. I proved that my mother had multiple myeloma, but how can I prove radiation and chemical exposure when there are no accurate records to help me? Pan American is no longer in business. I cannot get records from them. Plus the Nevada Test Site had multiple prime contractors during these years that my mom was there -- McGee, Wico, Benbecto* -- every time they changed prime contractors, records got lost, misplaced, buried in a landfill, falsified by DOE's own acknowledgement.

There was no industrial hygiene prior to 1971, by Bechtel's own acknowledgement. Not only was

there radiation exposure, but there was chemical dose -- I'm sorry. Not only do we need radiation exposure, but we need chemical dose reconstruction also. Both cause cancer. I presented a copy of the discrepancies that Sanford and Cohen (sic) found in the site profile.

UNIDENTIFIED: Can you please stop talking on the phone so we can hear (unintelligible) --

MS. COOK: The bottom line is that the site profile is inadequate, and there's insufficient and incomplete data to do my mother's dose reconstruction. At best they did dose reconstruction that was calculated at a sample size of 2,000 instead of 10,000.

Sadly, I'm not even sure what it means. The technical jargon and signs and symbols that are in the reports are not user friendly. They're designed to leave you dazed and confused after trying to read through them.

I told Curtis Johnson, the hearing representative, that I have given all that I have. And the final letter I received stated that because they had not received any more information from me in 30 days that my claim

was denied.
I also noted in the hearing all the mistakes that had been made by NIOSH, and he apologized profusely. But nonetheless, the first dose reconstruction was done on a secondary cancer. I had to call them on it. Then it had to be redone and I had to have another phone interview because there were no notes taken on my original phone interview. That was four years prior to that. I was told that this person that did the original phone interview had been fired for sloppy work. And needless to say, finding out four years later, I was very, very unhappy.
I don't have confidence in the system. The oral hearing was a total waste of time, energy, my taxes and your taxes.
I have a signed receipt from DOL requesting they keep my file open dated July 7th. It has not been acknowledged as yet.
The only legitimate records of exposure that I have is the material my mother saved and the stories that she told. During the large tests she said she would -- they would ship them off to Mercury for an hour, then bring them back to

Jackass Flats. She told me that while they were walking on the rocks in their shoes, the cleanup crews were out there in HazMat suits. The fact that they were testing nuclear reactors meant that there were accidents, also. And the reactors would blow up and sometimes come apart, exposing them to toxic substances and radiation.

Projects NERVA, Rover, Thebes* and the extremely dirty Pluto were a common part of my vocabulary.

This is proof. There's Jackass Flats. Proof is, my mom was there 'cause I've got pictures of nuclear reactors -- hot nuclear reactors. This poor guy, he's smiling.

And finally, it touches my heart because this is a Rover reunion where the last people from her division had a little reunion party to celebrate Rover. Little did she know at the time what was going to happen.

All this being said to the Board, I thank you and I hope that you will consider my claim in the future for special co-- Special Exposure Cohort. I also request the Board give Special -- SEC to Areas 25, 27, E-med, R-med and NRDS.

Thank you.

DR. ZIEMER: Thank you very much, Patricia. It's often very difficult to even share those experiences.

Dorothy Clayton, is Dorothy here? Dorothy.

MS. CLAYTON: (Off microphone) (Unintelligible)

DR. ZIEMER: Sure.

MS. CLAYTON: (Off microphone) (Unintelligible) I'd like -- (on microphone) I have some records to share with you. My husband worked at the Nevada Test Site for 29 and a half years, and I was able to get 1,370 pages of declassified records from the DOE, but I just chose about five years that I'd like to share with you of -- - of the records that -- that I have gotten from him -- for him.

I'll start with 1959 when the radiation exposure at the Test Site at that time was three rems per quarter and five rems per year. His radiation exposure history from the DOE shows that he got 12,130 millirems. That includes 10,100 in tritium. Also there's a -- there's a memo from -- it's for -- to the Nevada Operations Department, Division of the Atomic Energy Commission, asking that his

radiation exposure be raised to 12,000 millirems a year. This memo is dated September the 4th. He was already up to 8.3 at that point, so he was well over the 5 -- 5,000 millirems at that -- at that time.

Then in October, October the 1st, his radiation exposure was 11.9. The radiation chief wrote a memo that said (reading) It would be my recommendation that Mr. Clayton be transferred from his present work assignment to an area where his exposure possibilities would be removed entirely.

That didn't happen. There are urine samples done, nasal swabs done from October the 19th, 1959 all the way through December of 1959. On the -- the year-end report it shows the radiation dosage that he received up through September. October, November and December are blank. They did not record any radiation at all that he had gotten because he was -- he was already over the 12,000 that they had given him -- had raised it to. That was 1959.

1961, this is -- there was a teletype from Reynolds Electric to James B. (unintelligible) of the U.S. AEC. This is dated November the

28th, 1961 asking to raise my husband's radiation limit again to the 12,000 millirems per year. It says (reading) We urgently request that approximately 30 key personnel now working in B tunnel, all of whom have exceeded or are about to exceed three R for the quarter, be allowed to continue working in B tunnel. And this is considered necessary if we are to meet the test schedules, and it's highly desirable from an economic standpoint. They didn't want to bring in new hires and train them to do the job. They'd rather these men be over-exposed to radiation. That was in 1961.

In 1962 -- I have copies of his film badge cards, the original film badge cards. It shows -- on the radiation exposure history it shows that he had gotten 1,955 millirems for that year. However, on this film badge card right here, which is date-stamped November the 29th, 1962, his radiation exposure was 3,113 -- a discrepancy there. There's log book entries. They blacked out some of the names to provec-- you know, to prevent other people's names from showing, but they made a notation of one of the

men having radiated hair, radiation in his hair. They also made a note in this log book regarding the lost film badges, that the men were requested -- if they had an abundance of radiation -- to lose their badges. Here -- it said there was a call from the lab and said we should get some lost film badge cards to provide for the men who were asked to lose their badges and replace them. There's another note in another log book that said the call -- they had received a call for information on one of the men who had lost his film badge. About eight months before my husband passed away he dictated a ten-page work history to me, and this was in 19-- this was October the 26th, 1998. He passed away in 1999, June the 5th. He had been working on the mesa above the tunnels, and when the rad safe monitor came to -- back to him, he made a report to the net control, and as soon as the monitor told the people at the net control how much radiation my husband had at that time and how high the radiation was at that level, they told him to get him off of the mesa, then, and the rad safe supervisor recommended that my husband lose his

film badge, which he did, because at that time my husband -- his words, the miners were in fear of losing their jobs if they got too much radiation.

They weren't aware of the consequences of over-abundance of radiation. They knew it was bad -- the workers did, I'm sure -- but they didn't know the consequences of -- of losing a badge and not being able to count that radiation.

Then in 19-- in 1963 the radiation exposure history shows 240 millirems of radiation. However, a film -- copy of a film badge card that I have dated 8/29/63 shows that he had 4,611 millirems for the year.

In 1964 the radiation exposure history shows zero. That was a year that -- where they had an abundance of heavy-duty tests. The -- one of his film badge cards which is date-stamped May the 2nd, 1964 shows 5,675 millirems.

The last one I have to show you is 1965. The radiation exposure history shows 265 millirems. However, his film badge card shows 6,486 millirems. And it's their -- it's a copy of the actual film badge cards.

So I don't see how an accurate dose

reconstruction can happen when they were doing things like this. I don't see how a radiation exposure history can be determined when they have records like this, the film badge cards, to go by.

I've already been paid for my claim, but there's many people who haven't. And -- and if they're going by the records provided by the DOE, they're incorrect -- very, very, very inaccurate.

And I just -- there's only one more thing to share. They're asking the widows -- this is the letter from the Department of Labor. The very last paragraph says (reading) Remember, as the claimant it is ultimately your responsibility to submit the necessary information to substantiate your claims.

How unfair can that be? That was a secured area, and there is no way the widows would know what their husbands were working in. We were told -- I worked out there for several years. We were told even if we saw anything in the newspaper, we could not talk about it. We couldn't, it -- so how in the world can these widows substantiate any kind of a claim? So

hopefully we'll get a good dose reconstruction program going.

DR. ZIEMER: Thank you for your comments. I'd like to insert at this point that NIOSH certainly doesn't operate in the spirit of that last paragraph. They don't rely on the widows to provide the information on dose reconstruction. I think the -- the claimants do have to provide something on medical, but that's not a NIOSH statement, I assume. I'll ask Larry Elliott, I don't believe that's a NIOSH statement.

MR. ELLIOTT: She was reading from a Department of Labor letter.

DR. ZIEMER: Right. And I might add also -- and you know, the Board doesn't deal with the individual cases, but in cases where there are these kind of discrepancies, NIOSH always goes in favor of the higher number, so you get the benefit of the doubt on those -- those kinds of claims if there's -- I believe that would be correct.

I understand your claim has already been processed. I assume that the dose reconstructors had access to the information

that you shared with the Board, so -- I don't know if you want to comment or -- Larry, but --

MR. ELLIOTT: Yeah, I don't -- I don't think we had all of this information, which I find very interesting. I'm going to see Ms. Clayton afterward and see if we can talk with Mark Rolfes, who's helping Bob Presley out on the working group for this site. But this -- this kind of information stimulates my interest considerably.

DR. ZIEMER: Thank you very much. Next we'll hear from Dr. Jacob Paz, is Dr. Paz -- welcome.

(NOTE: The position between the following speaker and the microphone created a reverberation so extreme it rendered words completely unintelligible. This transcription was developed using a microphone positioned a distance away from the speaker and represents the best efforts of the reporter, but some words remained unclear.)

DR. PAZ: Certainly. Good evening. My name is Dr. Jacob Paz. I have a Ph.D. in Environmental Health Science from Polytechnic University, New York. I worked at the Nevada Test Site from 1989 to 1991 as an industrial hygienist. I

also with Senator Reid on NTS employee exposure issues. In my professional opinion, NTS who work 250 days between the years of 1961 and 1962 should be compensated and why due to recent advances in science. Number one, low level radiation and rec-- and radiation bystander effect. Recently the National Academy of Science completed a comprehensive evaluation of the literature relevant to the -- to the risk of radiation exposure, the committee concluding that since that radiation can cause other health cancer effects such as heart disease, strokes and further study is needed to predict the dose results in the known cancer health effect. The committee noted that it is -- that it is possible that children born of parents that have been exposed to radiation could be affected by those exposure. The committee concluded that the risks of low level radiation are equal but greater than previously thought. The bystander effect and the newly recognized method by which radiation produces changes in cell that were not directly hit but are in the vicinity of those that are change -- that were -- the changes include but not

limited to increases level of -- of repair proteins, increase -- increase apoptosis and increase damage. Some of these changes appear to constitute damage to the cell, while other probably reduce the damage or cause damage to the cell to disappear so that they do not -- so -- I'm sorry -- so that they cannot grow or become cancer. Genomic instability can occur in cell which survive exposure to low level radiation. According to the report, might contribute significantly to the radiation cancer risk.

Next, effect of this newly discovery had been reported in pages 553 to 571.

Finally, NIOSH dose reconstruction project should also take into consideration the following: the effect of mixed radiation exposure, for example, alpha, beta and gamma, and the possible synergistic interaction exposure mode to low and high LET particles.

Number two, sorption of radon by silica and cancer. Recently there has been growing concern of sorption of radon by silica and the potential increasing -- increasing lung cancer. In 1997 IARC changed the classification of

silica dust from 2A to 1. Two, Goldsmith, 1997 3 stated meaning the silica is a human carcinogens just like radon. All uranium miner are exposed to silica and, and he furthermore stated none of the epidemiologic studies that I'm aware of have data on silica dust. That mean that the EPA radon extrapolation should -- could be a flaw, resulting three possibility scenarios. One, silica may interact to increase cancer potency slope; two, silica and radon may not affect each other and the (unintelligible) slope; three, silica and radon may have an antagonistic effect.

The EPA extrapolation for public health, the radon/silica question must be addressed. In my opinion, the EPA claim that indoor radon is second leading cause of lung cancer after smoking remains only a claim, and should be examined critically. Lung cancer probably caused by combined action of radon and its offspring and silica dust. Exposure to zeolite fiber and eronite and mordenite and known to be a potent carcinogen and must be addressed and I'd like to address it. It was found in some vein in the Nevada Test Site. I test three

sample were negative.
These report are extremely important since miner at the Nevada Test Site have been exposed to silica dust and radon and subsequent -- and subsequently could cause a synergistic interactions and the develop of elevated lung cancer. This need to be further investigated.
Second -- second -- secondary, there is a possibility exposure of NTS worker to silica dust to radiation in both during tunnels operation and ground -- and -- and ground to nuclear detonation devices and the possible increase in cancer rate. I have conduct and if the committee want a very extensive physical and chemical testing for about a year and a half on silica and chemical agent and -- they're available.
I'd just like to make also notes which is not, but it might also be very important is the direction between chemical and radiation and the report by Preston in 2003 and 2005 which is really stated that potential of interaction and -- and making recommendation of -- for additional research. Thank you very much.
DR. ZIEMER: Thank you, Dr. Paz. Also could I

ask you to clarify, the National Academy of -- the report to which you refer, is that --

DR. PAZ: BEIR VII.

DR. ZIEMER: -- BEIR VII report. Okay, I -- I just wanted to note that --

DR. PAZ: Yes.

DR. ZIEMER: -- the risk values from BEIR VII are essentially the risk values that are used by NIOSH --

DR. PAZ: Yes.

DR. ZIEMER: -- in dose reconstruction.

DR. PAZ: Okay, I'm just making my -- that's my remark.

DR. ZIEMER: I just wanted to make sure -- yeah. Thank you.

Next we'll hear from Knut Ringen -- Knut.

MR. RINGEN: Thank you very much for entertaining me again and -- first of all, I appreciate that you've finally gotten me some numbers on construction workers, and I apologize to you that you've been on the end of my belligerent statements in that regard, but of course that's why you get paid the big bucks.

DR. ZIEMER: Yeah, right.

MR. RINGEN: I want to make sure that Larry's comment earlier today did not -- was not interpreted to mean that CPWR in any way had any involvement in the drafting of OTIB-0052. We did not -- we did work with NIOSH leading up to it in various ways, but we had no knowledge of the content of that document till we received it two weeks ago, and we then put together a committee of internal and external scientific advisors to help us review it. And that group came up with a number of questions about it that we discussed with Larry in a conference call on Monday and that we sent him a subsequent five-page letter outlining the concerns that we think need to be addressed. These concerns include the underlying assumptions -- Jim Melius referred to one of them, we have identified five others that are very significant; the strengths and weaknesses of the datasets that are included, because all of them have significant problems in terms of both their coverage and in terms of their completeness, and they're all unaudited and they consist of simply annualized data for workers; the external validity of the findings

from the sets -- datasets that are available and to the extent to which you can extrapolate from that to other sites; the conclusions and guidance provided to dose reconstructors as a result of that analysis; and finally we wonder how do dose reconstructors decide when to use one of these OTIBs and not another, and what's the relationship between them because you get -- beginning to get quite a few of them.

It was unfortunate in the presentation that the focus was so much on that one composite dataset because that's not really meaningful in the end. If you look at the underlying datasets individually, there's huge variation between them so that some may have a dose for construction workers that's lower than for other workers, while others have cons-- have values that are significantly higher. And I don't want the discussion of the document to be held up on the basis of what was in that one slide that you had available to you.

We appreciate your decision to have a working group review this document, and we offer to participate in the working group as you see appropriate. Within this letter that we have

sent to Larry Elliott I think there's a fairly extensive agenda that ought to form a good basis for the deliberations of the committee, and I think we can provide the committee with expertise in terms of the construction -- industrial hygiene expertise that you need to review it properly. So thank you. And thank you for your service.

DR. ZIEMER: Yeah. Knut, as a starting point, could you provide us with the list of five or whatever it is issues that were of concern to your group? You don't have to do it right now, but I --

MR. ELLIOTT: We'll get you a copy of it.

MR. RINGEN: (Off microphone) Larry's (unintelligible).

DR. ZIEMER: Oh, Larry can get us a copy and -- we'll just make it available to the Board.

MR. RINGEN: Absolutely.

DR. ZIEMER: Obviously we've had some discussions today, even some members sort of off-line as we are looking at the document. And like any other of the TIBs, it's a -- it's a living document and we'll have opportunities -- I think NIOSH will welcome input from --

from all of us to -- if we can refine it and improve it in any way, so --

MR. RINGEN: We appreciate how difficult it is for NIOSH to try to do what it's trying to do with this, but there's still lots of work that needs to be done on it.

DR. ZIEMER: I see Brian -- I didn't know Brian Dodd was with us. Brian Dodd is the President of the Health Physics Society. Brian, welcome.

MR. DODD: Thank you. Good evening. My name is Brian Dodd. I'm President of the Health Physics Society and a Las Vegas resident for three years now. I'd like to thank NIOSH and the Advisory Board for -- on Radiation and Worker Health for the opportunity to make some comments in this public meeting and for holding the meeting, and I'd like to make some comments on behalf of the Health Physics Society.

For those not familiar with the Health Physics Society, it's an independent scientific organization whose members are professionals in the field of radiation safety. The Society's mission is excellence in the science and practice of radiation safety. HPS activities include encouraging research in radiation

science, developing standards and disseminating radiation safety information.

By way of background on my comments today, I'd like to quickly review the Society's position statement on the subject entitled "Compensation for Diseases that Might be Caused by Radiation Must Consider the Dose." This is available on the Society's web site of hps.org in the documents section. This statement was first adopted in March of 2000 and states that the HPS believes that a person's radiation dose must be considered in determining whether to provide compensation for disease that could have been caused by radiation. It also states that there should be no compensation for persons whose lifetime doses are less than approximately .1 sieverts, ten rem, 10,000 millirem.

The Health Physics Society strongly supports compensation for workers who are likely to have been harmed by occupational radiation exposure -- strongly supports. Our knowledge about the potential health effects of ionizing radiation is extensive. It's known that radiation cannot cause all types of diseases. It's also known

that for those diseases observed to be caused by radiation, the likelihood that radiation will cause a disease increases as the dose increases. In other words, any particular disease's likelihood of having been caused by radiation is dependent on the dose to the individual. This relationship of increasing likelihood of disease with increasing dose has only been observed for doses greater than approximately .1 sieverts, the ten rem.

The likelihood of radiation-induced disease below this level, if it exists at all, is so small that it's not measurable. It is not a matter of scientific fact, and it can only be established utilizing hypothetical mathematical dose response models.

Presumption of causation has no scientific or medical basis without consideration of dose. That is, the simple fact that some radiation exposure occurred is not a measure of hazard. The amounts of exposure -- i.e., the dose -- is the only measure of the hazard, and the only measure of the likelihood of the disease or injury has been caused by the radiation.

It's with this background that the HPS is

concerned with the pressure on the Board to make every facility and cohort a Special Exposure Cohort. The Society is concerned because of the presumption that a cancer in a member of a designated SEC is caused by radiation and is paid compensation without regard for the dose. The HPS would urge the Board to resist the pressure and to use dose reconstruction as the basis for compensation, except in very extraordinary situations where even broad ceilings on an individual's dose cannot be estimated.

It is feared that there may be a tendency for the Board to take the easy path and perhaps save the money of a dose reconstruction by generously granting SEC status. However, the causation of a cancer by radiation is a question of science, and the science should be followed whenever possible. Abandoning science in a scientific issue can set a precedent that could result in a misappropriation of public money and could reinforce a common fear that any level of radiation will cause a cancer, thereby influencing society to abandon the beneficial uses of radiation technology.

I want to reiterate the statement right in the beginning, that the Health Physics Society's fundamental position is that it strongly supports compensation for any worker that is likely to have been harmed by occupational radiation exposure. However, it also strongly believes that such a determination should be informed by the science.

That concludes my comments for the day, and I thank you for the opportunity of sharing them with you.

DR. ZIEMER: Thank you very much, Brian. We appreciate the input to -- to the Board.

Next I have Sandra Jackson. Is Sandra here?

MS. JACKSON: I appreciate this opportunity to present some information. I'm -- I'm standing up for my -- can you not hear me?

DR. WADE: Speak up just a little --

DR. ZIEMER: Just a little -- little closer.

MS. JACKSON: Okay. Is that better?

DR. ZIEMER: That's good.

DR. WADE: That's good.

DR. ZIEMER: That's good.

MS. JACKSON: Okay. I am representing my dad, who died of pancreatic and liver cancer in

1992. My dad, Donald Eugene Rauch, worked for Sandia National Labs from 1950 to 1981. During that time he worked at Nevada Test Site and Tonapah Test Site. He was a weapons handler and assembler, with training that started in 1957, and all of this is verified by NIOSH. NIOSH reports only five years of dosimetry records for monitoring radiation during 1965, 1966 at the Nevada Test Site, and during 1959, 1972 and 1973 at Sandia National Laboratories in Albuquerque. The dosimetry records are few and far in between. NIOSH claims that this is due to the fact that he worked with non-nuclear weapons.

From the research that my brother and I have done, and the knowledge given to us that was reported by my dad to us, we know that he worked with nuclear weapons far more extensively than is shown. My brother Don and I started with our claim in November 2001. His NIOSH record number was 2,076. We have fought to keep the case open, bringing new evidence of his exposure to radiation and the culmination of radiation that caused his death from pancreatic and liver cancer in 1992. Hints

from sympathetic caseworkers gave us directions to find certain health records to validate radiation exposure. We've gone to great expense and time to work on this for all of these years to get records, et cetera, only to find that NIOSH already had them and are still -- and we're still not any closer to resolution. We're now being pressured to close the case, even though I have an affidavit of a gentleman that worked with Williams Electric Engineering and remembers seeing my dad during the Sedan test in 1962 showing evidence that he was at the Nevada Test Site on multiple occasions, directly involved at the set-up and clean-up of test shots, which they have not yet recognized.

In my packet I have a complete letter that my brother wrote to the DOL in January of this year concerning the extremely poor way this whole situation has been handled. I've requested this letter to be included and be read thoroughly so as not to take up too much time at this point. No response was made to this letter for two months, until we contacted Senator Reid's office and Kathleen Rozner sent

a fax to NIOSH demanding a response. One of the points that was brought out by this letter is the DOL did not comply with their own procedures in completing a dose reconstruction. Dose reconstruction was completed before a previously-assigned oral interview which left out important facts which should have been included in the reconstruction. Dose reconstruction was completed in 12/12/05, and the interview was done 12/13/05.

Each time new material was found and a new dose reconstruction was completed, the dose levels were lowered from previous reports, keeping the level below the 50 percent needed to follow through with the compensation. How could rem to the pancreas in the report done on 12/12 of '05 be only 15.282, when in the previous report only seven months prior on 5/12/05 it was 64.412, even though there were more dosimetry records found, more medical problems and evidence discovered. They called this efficiency. Efficiency seems to be another word for claimant elimination process.

We have more than 16 caseworkers listed in my brother's letter over these five years that

we've been trying to work through this compensation process. Each new caseworker didn't know what had been done prior. We started each time from scratch, educating them and getting them up to speed, wasting even more time.

As we went through the process we were constantly having to prove the facts of our dad's medical history, as well as his employment history. Example, I had school records from 1960 to 1962 that we lived in Tonapah, and that was where my dad, from Tonapah, went to the Tonapah Test Site. That was not sufficient. I was told we needed an affidavit of somebody who worked with him at the test site. When I found land records of a home that my dad purchased in Tonapah, miraculously his records of working in Tonapah at the test site showed up with medical records during this same time period. They already had the information that he worked there, and the medical records, before they asked us to prove that he had lived there.

Prior to our family moving to Tonapah to live, my dad was flying out of Albuquerque on Monday

mornings for Las Vegas, where he was taken to the Nevada Test Site, and flying back home on Friday evenings. I remember my mom and I picking him up many Friday evenings. This must have been the time that he was being trained as a weapons handler and assembler. There's no record of this time spent at the Test Site. With the top secrecy of the Nevada Test Site, surely there was some sign-ins at the checkpoint for everybody in and out of that site. No one has made any efforts to find those sheets that would have given proof to so many people who were in and out of that facility. Have those sign-in sheets conveniently disappeared like the dosimetry records?

NIOSH states that in their report the Tonapah Test Site was primary -- provided an isolated place to test ballistics and non-nuclear features of atomic weapons, and they explained it wasn't necessary for badge readings. When we lived in Tonapah from 1960 to '62 I remember my dad worked very late. He told me later in life that he would go to the Tonapah Test -- he would go from the Tonapah Test Site to the

Nevada Test Site to participate in test shots. I just by chance ran across a gentleman that worked for Reynolds Electric Engineering and he actually remembers my dad during the Sedan test shot. His affidavit is included in my complete notes and I will read a little bit about what he said in the affidavit. It asked work that the employee did, and this is by Horace Wiley. (Reading) Donald Rauch from Sandia National Lab duties. They brought in the nuclear device, set it in place, ran dry (unintelligible) from the diagnostic trailer 1,000 to 1,500 feet from the point of detonation, supervised correct placement, number and size of cables, and monitored the detonation from the control point hill one to two miles away. Sandia's crew went back in for cleanup after the Sedan shot the very next day.

This is his knowledge of the employees worker relating to my dad. And this is -- he said (reading) I worked for Reynolds Electric Engineering. Our crew's duties were to set up the cable of power and hydrogen to the canister that held the nuclear device for the test. Donald Rauch and the Sandia crew ran diagnostic

tests to record the action and resistant, and told us how many cables, size, and their correct placement to make sure of the continuity of the test. The next day our crew went in to release the cables and clean up with the Sandia crew, including Donald Rauch, supervising us as to what needed to be done. Many times the tests were still flaring when we went in, and Sedan continued to flare for many weeks afterwards. I did see Donald Rauch at the Nevada Test Site many times over the course -- several times over the course of the time that I was working at the Nevada Test Site from the late '50s to the mid-'60s. I worked in areas eight, nine and ten and in the flats. Due to the amount of years that have passed and the large number of tests, I cannot be specific with the dates and test shots other than the Sedan test, which left a strong and clear impression in my mind. This information I've related to Sandy Jackson and she's compiled it for continuity and ease of reading. I have read through the information and 'firm what is provided here is accurate. As far as the Sedan nuclear test as just one of them, this took

place on July 6th of 1962 of -- of the Operation Plowshare program to investigate the use of nuclear weapons for mining, cratering and other civilian purposes. This blast yielded 104 kilotons. The only one larger than that was 105. It consisted of 12 million short tons of soil, resulted in a radioactive cloud that rose to an altitude of 12,000 feet. The dust plume headed northeast and then east towards the Mississippi River. It created a crater of 320 feet deep and has a diameter of about 1,280 feet.

So it was a huge test and -- and exploded, and I have copies that will be included of all of the other tests, which were very low, less than 20 KTs, 38 kilotons, 25 kilotons, so 104 was huge.

On August -- let's see, I want to make sure -- NIOSH reports -- excuse me. Just that one shot could have had a very large impact on his health and certainly could have been contributory factor to all the cancer that he had over the years, culminating with his death.

His affidavit shows that my dad was at the Nevada Test Site and involved in who knows how

many other tests. Where are those dosimetry records?

On August 9th, 1963 after we returned to Albuquerque from Tonapah, Dad had to have a thyroidectomy due to growths on the thyroid. Because of the biopsy of the tumors came out non-malignant, NIOSH did not even recognize or include the surgery as definitive evidence of radiation exposure. There is a clear indication that the people near Chernobyl had the same growths on their thyroids due to radiation exposure. These growths generally led to cancer if left untreated. It seems the fact that the nodules were removed before becoming cancers negated the exposure.

A few of the stories that Dad told us over the last several years of his life -- I myself received some of these stories. He was told to put his badge in the refrigerator and walk down to ground zero just days after they set off the test. At times he knew he had received high radiation. When he turned in his badge, the lab came back with inconclusive results due to a lab malfunction.

In the early '70s Dad became very sick and the

doctors were unable to find the cause. He had a friend who recognized it as radiation sickness due to his friend being present at Hiroshima. The friend told him about the baths with iodine and salt and I can't remember what else were added into it that were used in Hiroshima on survivors of the nuclear bomb. He did the radiation cleansing baths for the specified time and the symptoms went away.

He was in the test group right before his death in 1991. As I remember, it was Sandia-authorized, consisted of five men that they were able to find still living in the Albuquerque area that had worked at the Test Site. Two had been diagnosed with cancer when Dad found out he had cancer. One died, the other one was critical, and before he died the fourth one was diagnosed with cancer.

He related when he first started being exposed to radiation they were allowed 18 Rograms of exposure per year as being safe. Over the year that was low-- over the years that was lowered to eight Rograms of exposure per year, less than half. They realized that the dosages were too high and the exposure at higher dosage

would be detrimental to health. He was very concerned to what the higher dosage that were allowed in the early years would do to his health.

My sister-in-law, which is my brother's wife, was told of him being sick after working on the bombs and the badge that had been shown high radiation. One time he was told to take off and keep working because it showed such high radiation. They all got sick and Sandia denied that anything was wrong. He talked about canisters leaking and Sandia trying to cover it up, that they received too much radiation many times. Even when the badge registered high they would say it was okay. He would talk to me often about all of this, and was very worried that he would die from cancer from the radiation. He had many skin cancers received over the years, including melanoma. His head would break out with infections.

Back to just my comments, my dad and thousand of other workers were dangerously exposed to radiation and other caustic elements. They suffered lingering health problems and much pain right up to their deaths. Maybe at first

the government didn't realize the seriousness of the radiation exposure, but as they studied and reviewed the results of this radiation and the devastation, they do know now and have known for many years. These workers trusted their employers and their government to do right by them. When they saw how they were being used and exposed and tried to speak out, they were told to shut up or lose their jobs. I see millions of dollars being wasted to pay caseworkers that don't have a clue. They shuffle paperwork from desk to desk. They keep those who deserve compensation from receiving it. Bureaucracy, red tape and cover-ups must be stopped here and now. These people are truly the unsung heroes of the Cold War. Their sacrifices allowed our country to gain world supremacy in nuclear atomic fission and -- and to be known as a country not to be contended with. They are just as important as those soldiers that fought and gave their lives to keep our country free. Recognition for these workers' sacrifices and due compensation which cannot begin to make up for the suffering, loss of life and the pain of those families who were

left behind needs to be given now or all of this suffering and loss of these lives will be in vain. Thank you.

DR. ZIEMER: Thank you very much, Sandra, for sharing that with us.

This now concludes our public comment session for today. There will be another public comment session tomorrow at -- I'm looking for the time -- tomorrow at 7:30.

We stand recessed until tomorrow morning at 8:30.

(Whereupon, the meeting was adjourned at 6:20 p.m.)

CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA

COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Court Reporter, do hereby certify that I reported the above and foregoing on the day of Sept. 19, 2006; and it is a true and accurate transcript of the testimony captioned herein.

I further certify that I am neither kin nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 18th day of November, 2006.

_____

STEVEN RAY GREEN, CCR

CERTIFIED MERIT COURT REPORTER

CERTIFICATE NUMBER: A-2102